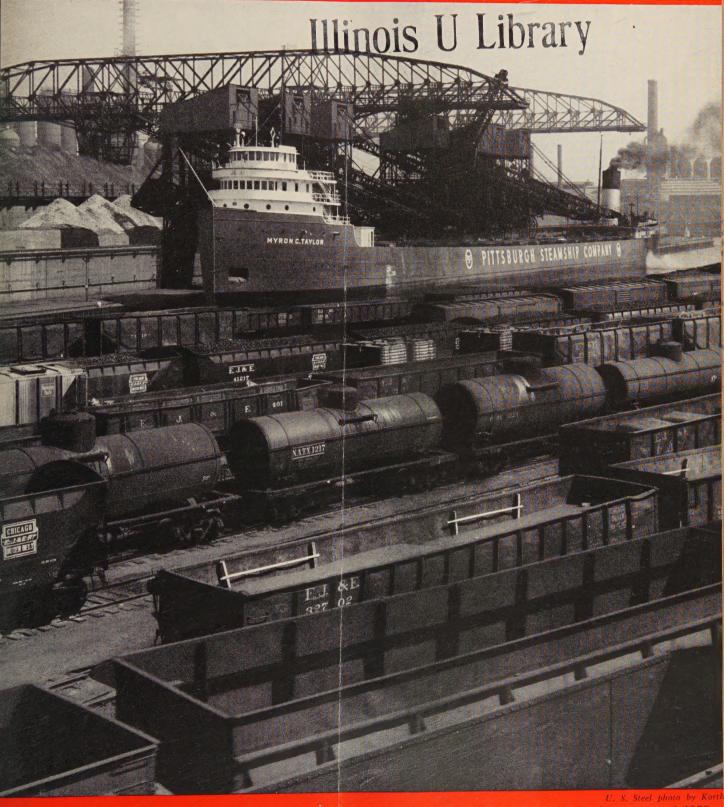
COMMERCE

SEPTEMBER, 1949

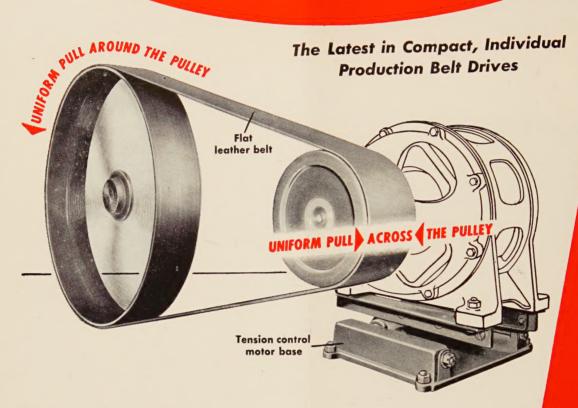
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economist Sumper Slichter forecasts an economic upturn...probably by year's end, sure by the first quarter of 1950

Business Forecast: Fair—See Page 16

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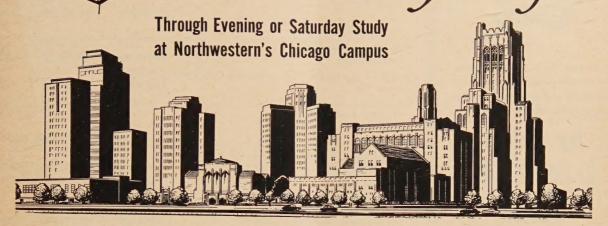
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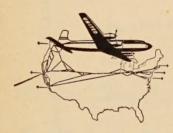
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STATISTICS OF

CHICAGO BUSINESS

	July, 1949	June, 1949	July, 1948
Building permits		650	\$19,980,60
Cost	\$8,447,000	\$17,095,200	\$19,900,00
Contracts awarded on building projects,	1.132	1.063	95
Cost		\$26,911,000	
F. W. Dodge Corp.			
Real Estate transfers	5,104	5,516	6,42
Consideration		\$5,456,370	\$7,791,06
Retailers' Occupation Tax collection, Cook Co.	\$7,778,631	\$7,551,783	\$8,223,61
Department store sales index	165.61	222.4	199.
(Federal Reserve Board) (Daily average 1935-39=100)			All the
Bank clearings	\$2,863,181,100	\$3,167,097,458	\$3,251,867,55
Bank debits to individual accounts:	67 (610 000 000	217 644 000 000	017 000 000 00
7th Federal Reserve District			
Chicago only	\$7,529,508,000	\$8,599,412,000	\$8,140,429,00
Chicago Stock Exchange transactions: Number of shares traded	399,336	479,561	578,00
Market value of shares traded		\$10,877,250	\$18,058,06
Railway express shipments, Chicago area	1,007,858	1,210,606	1,358,59
Air express shipments, Chicago area	41,585	45,084	48,85
L.C.L. merchandise cars	22,576	25,156	26,74
Originating local telephone messages		173,230,834	168,833,803
Electric power production, kwh	924,668,000	940,590,000	922,344,000
Revenue passengers carried by Chicago Transit Authority lines: Surface Division			
		61,292,558	64,727,21
Rapid Transit Division		13,562,659	13,642,930
Postal receipts	\$7,572,045	\$8,906,958	\$7,322,88!
Air passengers: Arrivals			
		144,994	115,909
Departures		150,565	120,510
Consumers' Price Index (1935-39=100)	173.9	175.9	178.6
Live stock slaughtered under federal inspection	403,144	460,727	446,49
Families on relief rolls: Cook County	95 596	94.091	14.014
Other Illinois counties		24,981	14,919
	17,914	18,078	12,448
1-Preliminary figures.			- 201-1-1

OCTOBER, 1949, TAX CALENDAR			
te l	Due Tax	Returnable to	
15	Illinois Retailers' Occupation Tax return and payment for month of September	Director of Revenue	
31	Federal Old Age Benefit Tax for third quarter of 1949 return and payment. (Form SS-IA)	Collector of Internal Revenue	
31	HEnois Unemployment Compensation contribution report and payment for third quarter of 1949 (UC-3 and UC-40)	Director, Depart- ment of Labor	
1	Quarterly return and payment (by depositary receipts or cash) of taxes withheld by employers for third quarter of 1949 (Form W-1)	Collector of Internal Revenue	
1	Fourth quarterly installment on 1948 Federal Unemployment Compensation Tax	Collector of Internal Revenue	
1	Federal Excise Tax return and payment due for September, 1949	Authorized Depositary	
1	Employers who withheld more than \$100 during pre-	Collector of	

vious month pay amount withheld to

or remittance may be made with quarterly return

Internal Revenue

Collector of Internal Revenue

COMMERCE

PUBLISHED SINCE 1904

BY THE CHICAGO ASSOCIATION OF COMMERCE AND INDUSTRY 1 NORTH LA SALLE STREET, CHICAGO 2 • FRANKLIN 2-7700

VOL. 46

NO. 8

SEPTEMBER, 1949

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Published monthly by The Chicago Association of Commerce and Industry, with offices at James and North Cook Streets, Barrington, Ill. and 1 North LaSalle Street, Chicago 2, Ill. Subscription rates: domestic \$2.00 a year; three years \$5.00; foreign \$3.00 a year; single copies 25 cents. Reentered as second class matter June 2, 1948, at the Post Office at Barrington, Ill., under the act of March 3, 1879. Copyright 1949, by the Chicago Association of Commerce and Industry. Reprint permission on request, Executive and Editorial Offices: 1 North LaSalle St., Chicago, Telephone Franklin 2-7700. Night Telephone: Editorial, Franklin 2-7717; Advertising, Franklin 2-7711. Neither Commerce nor The Chicago Association of Commerce and Industry sponsors or is committed to the views expressed by authors.

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In This Issue

No businessman need be reminded of the crucial importance of productivity. The question is: is it increasing? COMMERCE this month presents the results of a survery of Mid-west concerns which indicates that although output-perman-hour is rising generally, the record is spotty; some industries, some companies up, other down. Betty Savesky in her report (page 13) provides some hints as to why workers in one plant are breaking records, while others lag.

Washington writer Sid A. Levy reviews the strange second-year legislative history of the Taft-Hartley Act, the labor law that Candidate Harry Truman vowed to scrap in his 1948 presidential campaign. Why did the repeal drive fail this year. Probably another case of overconfidence. What's ahead in labor legislation? Mr. Levy provides some clues in his article page 15.

H-arvard University's distinguished economist Sumner Slichter declares that the current recession has been unusually mild, that it has been due largely to the curtailment of inventories and inventory buying, and that an upturn is due by Christmas or early next year at the latest. Economist Slichter's penetrating appraisal of today's business begins on page 16.

Those baby carriages and toddlers, as well as ex-GIs, are fast disappearing from American campuses. Veteran enrollments will be down sharply this Fall and, as a result, colleges will be less jammed, teaching burdens will be lightened, and more professorial time will be spent on research. Daniel F. Nicholson reports these interesting changes in campus life (page 18).

Thorium is a metal that boomed into industrial importance decades ago as a raw material for gas mantles. When that colorful era ended, thorium dropped into prolonged obscurity, but lately much attention is again being given to the almost-forgotten metal. The reason: thorium, like uranium, can be converted into atom bombs, atomic fuel and power. Georg Mann tells of the rebirth of interest in thorium (page 23).

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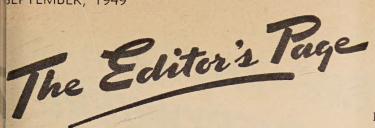
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SEPTEMBER, 1949

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An Expert On Monopoly Views Labor

THURMAN ARNOLD, former chief of the justice department's antitrust division, has offered some expert testimony before Senator Willis Robertson's congressional committee investigating labor union monopoly.

"The most dangerous power now in the hands of labor unions," said Arnold, "is that of forcing employers into a combination to restrict production and

raise prices."

As the former chief of the trustbusters sees it, the government's present power to deal with such monopolistic action as John L. Lewis' current restriction of coal production to three days a week is nil. Mr. Arnold testified that the antitrust provisions of the Clayton Act put "no limitation" on labor union activities which tend to restrain trade, control production or fix prices. Contrary to his own views, he said, the Supreme Court ruled that union activity can only be curbed when the union acts in "combination with employers." And "combination" is well nigh impossible to prove.

To correct the situation, Mr. Arnold suggests an amendment to the Clayton Act that would restrict unions to "legitimate" activities – those dealing with wages, hours, safety, health, recreation and organization – and would specifically make illegal such activities as strikes and boycotts which stop outside goods from coming into a community, and those which exclude efficient production methods, impose artificial prices, restrict production or encourage make-

work.

Mr. Arnold has summarized the situation neatly and on the basis of his antitrust experience he knows whereof he speaks. Whether Congress will take heed of his testimony remains to be seen. Ultimately it will have to if it is to prevent labor operation of the economy. History shows that monopolies tend to grow in power and in their abuses of power unless they are curbed by law. There is no reason to suppose that labor monopoly will differ from any other in this respect.

Security From Business

THERE is a widespread feeling among many Americans that their care and protection when hospitalized, disabled, unemployed or retired depends to a considerable degree upon the amount of federal funds expended upon such forms of public economic security. The government — which is intent upon extending compulsory social security of all kinds and spreading the belief that all things good come from Washington — quite understandably is not inclined to contradict this prevailing opinion.

People in and out of Washington who believe that social security rests wholly with government would do well to glance over some statistics recently compiled by Chicago's Research Council for Economic Security. They indicate that voluntary protection already exists to a very large degree throughout American industry. Of some 1,960,773 workers employed by 3,965 Midwestern concerns sampled, over 75 per cent have life insurance; over 70 per cent are covered by prepaid hospitalization plans; almost 50 per cent enjoy surgical benefits; over 60 per cent are under disability compensation programs; and about 40 per cent are enrolled in pension or retirement systems.

Furthermore, the financing of these security programs is largely borne by employers, the common practice being for companies to pay over 50 per cent of the cost, except in the case of prepaid hospitalization where the employe pays the entire cost in 57.2

per cent of all plans reported upon.

The truth is that private enterprise already has accomplished a great deal in helping the individual to provide against sickness, disability and death. The trend toward doing more in this direction is well established and can be counted on to bring more benefits to more people at no cost in taxes if government will allow the opportunity.

Tough Job

A CCORDING to Washington reports, Secretary of Defense Johnson's recent order to the armed services to dismiss 135,000 civilian employes and 12,073 reserve officers is meeting with a storm of protest. This is hardly surprising. Elimination of such a tremendous number of government jobs in one fell swoop could hardly be expected to be received with equanimity by the jobholders or by politicians. Knocking a cool million dollars a day off the federal payroll, as the order is expected to do, is staggeringly unpolitical.

Secretary Johnson can count on the most relentless kind of pressure against having his order carried out, especially since he says the cut is but a preliminary one. He has pledged himself, however, "to give the American people a dollar's worth of defense for every dollar they give me" and has said, "There is a

terrific waste and extravagance in defense."

The secretary is often characterized as undiplomatic and uncompromising. The nation's taxpayers can hope that this is an accurate description, for the secretary will need both of these qualities in abundance. Cutting nearly 150,000 persons and a million dollars a day off the federal payroll calls for rugged determination.

Man Sturdy

HOW TO SAVE TIME AND MONEY WHEN YOU HAVE AN ELECTRICAL PROBLEM

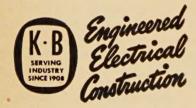
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• Coupon Boom, Cont'd-Sales promotion via the familiar sampling and coupon route appears to be having its biggest year in history. The Reuben H. Donnelley Corporation of Chicago reports that it passed out several times more coupons and door-to-door samples for big manufacturers during the first half of this year than during the same period in 1948, which was a near-record year for this type of promotion. Donnelley notes, however, that today many door-to-door crews are doing more than merely passing out samples; now, they are adding a brief sales talk. Combined, a sample plus a sales talk, says Donnelley, has proved to have "a terrific sales impact."

• Sore Gums All Over - Worldgirdling GIs left their customs in many a foreign nation, among them the American practice of chewing gum. As a result, says the Department of Commerce, foreign shipments of chewing gum last year soared to a new record of 11,000,000 pounds, four times higher than in the average pre-war year. Despite the enthusiasm with which foreign nations have taken up the habit, their manufacturers have not yet caught the trick of producing tasty gum. The result is that the United States continues to produce over 95 per cent of the world's chewing gum output.

• The Secret, At Last! — A Kansas City chemist named H. S. Landon declares that it is not so much the ornate, \$2.95 lure that attracts a fish as the smell of the bait. Research for this statement involved a check of some 600 natural substances regarded by fishermen as virtually irresistible to fish. Chemist Landon found that 50 synthetic flavoring concoctions are what really attract a fish. Perfecting the idea, he now has specific flavorings

for specific fish, including carp, base and trout.

• Aircraft Iron Spotter-A Genera Electric company inventor, Dr. Al bert W. Hull, has devised an intri cate new instrument that may en able aircraft to spot sunken ships at sea as well as iron ore deposits on land. The instrument is a modification of an earlier invention called a "magnetometer" and is highly sensitive to variations in the earth's magnetic field. Carried in a plane, the instrument records changes in the magnetic field that might be caused by large metallic objects, such as a sunken ship, or by iron deposits in the ground.

• Practical Patriotism-One Federal expense that taxpayers seldom think about is the cost of flying American flags over the 500 or more public buildings in Washington. It requires a tidy sum because the average flag lasts only 27 days. Now however, the Public Buildings Ad ministration is testing a nylon flag as a possible replacement for the standard cotton and wool variety. Having found that nylon flags require no laundering and last considerably longer, the PBA will probably begin using the synthetic fabric for the ten to fifteen thousand flags it supplies every year to federal agencies throughout the country.

• Coal Saver — A huge new 150, 000-kilowatt turbo - generator recently installed in Chicago by the Commonwealth Edison Company is not only one of the largest generators ever built but also one of the most efficient. The new unit is expected to have a fuel efficiency of 11,000 BTU per kilowatthour, while the companys' ten older units have an average efficiency of about 29,000 BTU per kilowatthour. This

(Continued on page 40)

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Trends in FINANCE and BUSINESS

Here's Business Outlook For The Year 1959 How will industry and the American society appear ten years hence? Students in

Harvard's Graduate School of Business Administration have been trying to answer that question in preparing term papers analyzing the future of specific industries. Each paper is written by a group of students who study management problems, population trends, technological changes and a variety of other factors likely to influence an industry's outlook. The composite picture of life in 1959, as forecast by the students, indicates some radical changes ahead.

For example, the Harvard students feel a relatively minor recession is likely in the early 'fifties, but they foresee neither a bust nor a war in the next decade. By 1959, one or more term papers predict, (1) the synthetic gasoline industry will be well on the road to commercial success, having helped at the outset by government subsidies; (2) the wholly automatic factory will not yet be a reality, but the metal-working industries, finding their profit margins narrowed by high labor costs, will have adopted automatic controls for most machine tools thus trimming labor costs a good 80 per cent; (3) television will have reached an expansion pinnacle, broadcasting losses will turned to profits by 1951, and by 1959 some 30,000,000 sets will be in operation - their cost down to \$75 for black and white, \$100 for color (introduced in 1956); (4) the aluminum industry will have reached maturity, but other newlydeveloped metals, notably magnesium and titanium, will have become competitive threats; some aluminum will be produced by atomic power plants at mine sites.

The Harvard student forecaster also see 1959 as a year in which the coin machine industry will become a \$20,000,000,000 have magazines, giant, selling men'i shirts, diapers, even movie tickets the latter at a controlled rate thanks to an electric eye which counts outgoing patrons and prevents overcrowding. One dark spot in the composite forecast: the fami ily will have declined further as a social unit, with the biggest mar kets for toys being schools, nur series and other institutional buyers

Tomorrow's TV And Radio Will Be Built In An Armour Research Foundation researcher acoustical engineer, Dr. Howard C. Hardy

has another forecast of things to come. By 1969, Dr. Hardy believes, radio cabinets will be almost as obsolete as wood-burning cooking stoves. By then radio amplifiers, speakers, and whole sound systems will be built into house walls much like plumbing and electrical wiring at present.

Today, declares Dr. Hardy, few American homes enjoy good sound reproduction because it is available only in expensive, custom-built radio and television units. But, he added, people are beginning to demand better acoustics and, thus, the trend will be toward built-in sets in which less money is spent for cabinets and more on acoustics.

Fishing Industry Launches Big Research Drive The nation's fishing industry is fidgeting uncomfortably these days, reports the Indus-

trial Bulletin published by Arthur D. Little, Inc., of Cambridge, Mass. The billion-dollar-a-year business faces a three-fold problem: dwindling resources, higher operating

(Continued on page 34)

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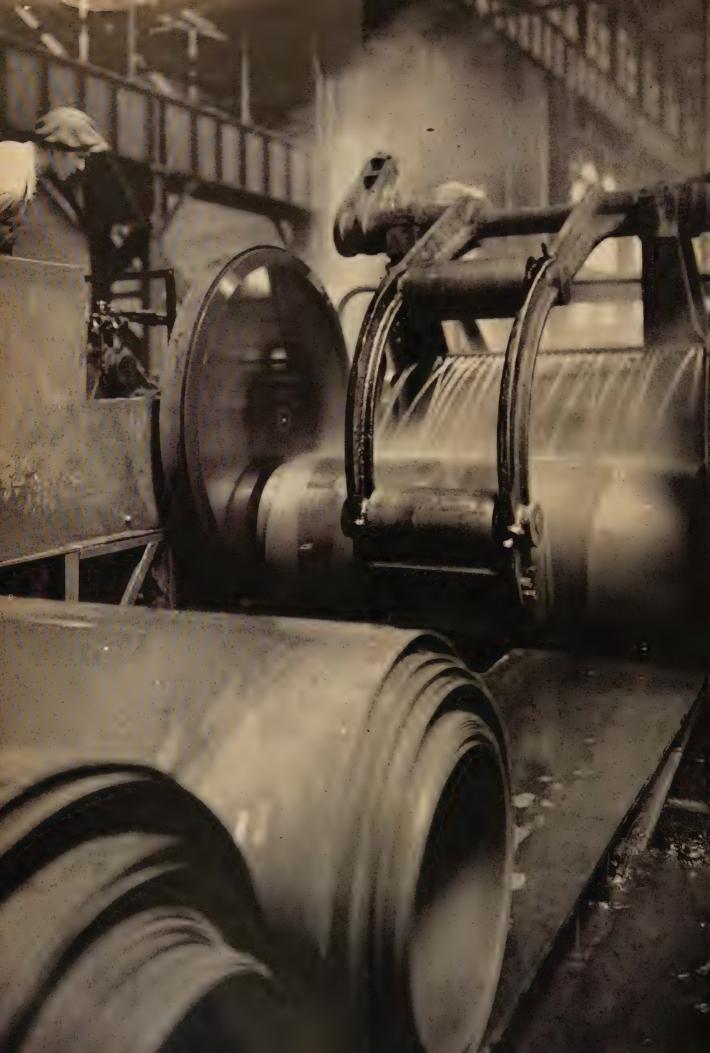
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for September, 1949

Productivity On The Upgrade

By Betty Savesky

Industry's Drive For More Output-Per-Manhour Begins To Pay Dividends, But Some Companies Still Lag Behind

NCREASED output per hour worked," declared the Twentieth Century Fund recently, "is the only way to make possible higher wages to workers, lower prices to consumers, greater returns to managers and owners, and greater leisure for all of us."

The statement, which reflects the thinking of a vast segment of the American business community, underscores the importance of the question: Is productivity — output per manhour — rising today throughout industry generally?

A survey of a variety of Midwestern manufacturing concerns indicates that productivity, in many lines of business and in many individual companies, is on the upgrade. The pattern is by no means uniform; some companies are receiving more output per manhour while others, producing identical products, have seen their productivity slide off. Here, for example, is the case of one big steel company where productivity has risen markedly:

One day in the midst of last July's heat wave, the first shift went to work in the company's merchant mill and, by the time their eight hours ended, they had broken the mill's production record for rolling bars into merchant shapes. Somehow the production drive was catching, for the second shift promptly set to work and broke that record. Completing the cycle, the third crew smashed all prior performance records and, since then, one production record after another has continued to topple.

Turnover Drops

The steel plant reports — significantly — that turnover in July was the lowest in eight years. One possible reason for low turnover as well as high productivity is that the company used to have 200 men a week applying for jobs, while now there are 800 looking for work every week. The steel company's experience provides one answer to the question of why productivity is rising more rapidly today than it was a year or three years ago.

Management generally has done much to improve productivity since 1945. Obsolescent machinery has been replaced, production techniques developed during the war have been translated into better planning and methods, materials handling has been improved as have plant layouts and facilities.

Nevertheless it has taken lengthening job queues, and shortened work weeks, as well as accumulating inventories and diminishing new orders to provide both workers and management with the incentive to bring the human element in productivity up to a par with technical advances.

There is growing evidence that some degree of insecurity is a stimulus to better productivity, but insecurity alone does not increase output.

A leading foundry cut its work week from five to four days because orders had fallen off, but 90 per cent of the normal output for five days continued to pour out of the plant. The explanation was that the foundry was on a wage incentive plan and workers were trying to compensate for the time loss by turning out more in the remaining four days.

Fewer Workers - More Goods

In a similar case, an electrical appliance manufacturer employing 1,800 men laid off 200 because he had too large an inventory of finished products. After the layoff, his inventory built up even faster

In long run, productivity is only increased by better tools and methods

because workers were speeding up their output. The manufacturer finally resorted to a progressive layoff until his inventory reached a better balance.

However, a totally different reaction to a reduction in the work week occurred in a factory turning out children's shoes. Cutting the number of working days from five to four, the company found its men were turning out only three days production. Their idea was to spread the work.

A radio-television manufacturer who laid off a sizeable portion of his workers, had a somewhat similar experience. Immediately, individual employe productivity, as measured in unit output per hour, rose appreciably. A few weeks later a second layoff was necessary. This time, however, employes instituted a slow down to "spread the work."

Cures For "Spreadwork"

As a rule, therefore, it appears that productivity ordinarily rises after layoffs and slashes in the work week. Where it does not, the trouble can often be corrected. For example, the shoe manufacturer mentioned got together with the local union and negotiated a guaranteed minimum

hours of work a week, in return for improved productive effort.

What causes productivity in some plants to sag, others to soar, when economic conditions worsen?

Factors In Diverse Trends

According to E. J. Burnell, Jr., partner in the management engineering firm of Booz, Allen and Hamilton, the following are some of the key factors:

- 1. Degree of unionization of a plant. In a highly unionized plant where strict seniority is observed in layoffs, the least efficient are not always those fired. Also the employe with long time seniority may have a too well insured sense of job security.
- 2. Type of union. The craft unions tend to subscribe more to the make work or spread work theory of Samuel Gompers, sire of the AFL, than do the mass production unions. Union feather-bedding rules also have some effect as do dictations to slow down on output.
- 3. State of labor relations. Good employe relations can give workers the incentive to improve efficiency. Such things as recognition for outstanding work frequently can spur employes to greater effort.

4. Presence of a good incentive plan. Such a plan gives worken the dollar-incentive for higher productivity.

While an increasing number of companies and industries report gains in productivity over last year, many have experienced not change. In some the net yield of goods or services per man hour i down from 1941, in others it is up. Some industries and companies lost ground in 1948 from 1947.

U. S. Bureau of Labor statistical reports show that these are among the industries which have surpassed their 1941 output per man hour: ice cream, rayon, electrical light and power, radios, cigars hosiery, steam railroads, bituminous coal mining, fertilizer, foot wear, leather, canning and preserving, and confectionery.

Lagging Industries

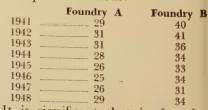
Others have lagged, some considerably. This list includes: canesugar refining, machine tools, flour milling, paper and pulp, lead and zinc mining, condensed and evaporated milk, iron mining, paints and varnishes, beet sugar refining, malt liquors, soap, anthracite mining, glass, telephone, cigarettes and tobacco, and construction machinery.

In many industries, BLS makes no studies. Meat packing is one of these. However, the experience of one leading packer is that unit output per man hour is off 5 per

cent from prewar.

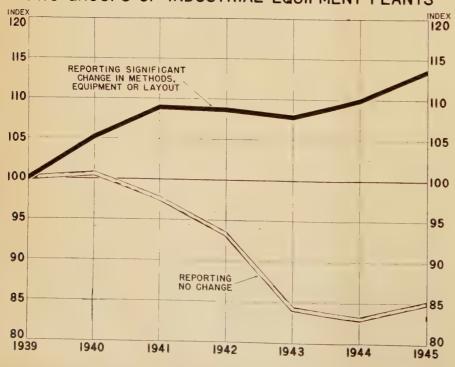
Not only do productivity patterns vary between industries and companies but also in the operations of a single company. One durable goods manufacturer, with grey iron foundries located in several cities, has found that productivity varies markedly between these plants.

Here is the experience of two different grey iron foundries of the same company. The measurement is pounds of good castings produced per man hour.



It is significant that in foundry
(Continued on page 52)

OUTPUT PER MAN-HOUR, TWO GROUPS OF INDUSTRIAL EQUIPMENT PLANTS





Candidate Truman's pledge to labor perished amid confusion

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The Strange Case of ...

Taft-Hartley—The Law That Escaped Repeal

By SID A. LEVY

O presidential candidate ever made a more clear-cut campaign promise than that of Harry Truman to repeal outright the Taft-Hartley Act. Few successful candidates have seen an important campaign pledge perish under stranger circumstances.

One of the high points in the curious chain of events that thwarted Harry Truman's pledge to labor occurred last May 4. On that day a noisy House of Representatives suddenly reversed itself and ended a fortnight of bitter wrangling by sending back to committee the so-called "Wood Bill," which was the Republican-Southern Democrat revision of the Taft-Hartley Act.

The day before, the House had gone through what appeared to be the final rollcall on the Wood Bill, passing it by a slim 217 to 203. But before enactment became official, a parliamentary ma-

neuver by New York's Vito Marcantonio forced the House into one last following-day vote on a corrected reprint of the measure. For administration leaders and labor lobbyists this was a last chance to head off disaster. Overnight, they corralled dozens of wayward Democrats and with threats and promises drew eleventh-hour commitments which finally shelved the Wood Bill on the following day.

Hollow Victory

To many Taft-Hartley opponents this looked like victory, but their elation was premature. Now, almost four months later, the House labor committee, still technically under orders to report out a new bill, is hopelessly bogged down and the administration has publicly admitted it has lost all hope of winning its labor legislation battle in this Congress.

The Senate, of course, has passed

its own labor bill, but it too is gathering dust. The Senate bill is a "softened" version of the Taft-Hartley Act, which would repeal those parts of the existing labor law that have drawn the most criticism from the public. The Senate, however, like the House, was not won over by labor's contention that the Taft-Hartley Act, while bad enough in boom times, is a potential union-buster in a recession. Thus, the administration and its labor supporters now face the job of taking the Taft-Hartley Act back to the voters in 1950 and perhaps, in 1952.

The Congressional reversal is far from what labor and the administration assumed would happen What seems to have this year. caused their defeat is probably the same thing that helped send the Republicans to defeat last November: overconfidence. Assuming the labor battle was as good as won last November, the administration proceeded to place before the new Congress a revised labor measure which was so completely contrary to the trend of Congressional thinking that a majority of both houses would not endorse it. This opposition existed despite the fact that many of the same Congressmen had favored Taft-Hartley re-

Went Too Far

The administration bill got off to a bad start when, after several weeks of secretive drafting at the Labor Department and the White House, it turned up on Capitol Hill as a re-enactment of the old Wagner Act, plus a compromising frill Many members of both parties had expected the bill to hew at least to the principle of balanced rights and responsibilities between labor and management. Instead, the unfair labor practices spelled out by Taft-Hartley for unions were to be erased and those for employers kept. Unions no longer were to be required to "bargain collectively in good faith" or to renounce Com-

(Continued on page 42)

Business Forecast: Fair

UPTURN LIKELY BEFORE CHRISTMAS

By SUMNER H. SLICHTER

Lamont University Professor, Harvard University



Dr. Sumner H. Slichter

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THE long-expected postwar recession began in the last half of 1948. In August and September, the price level reached its peak; in October and November, industrial production reached its high; in December, personal incomes reached their top. By June, 1949, the wholesale price level was down nine per cent from the postwar peak, the consumers' price index three per cent, the index of industrial production over 13 per cent, and unemployment was 1,600,000 higher than in June, 1948.

The recession has been longer in coming and thus far it has been milder than has generally been anticipated. Evidence of the mildness has been the maintenance of retail sales, the fact that expenditures on durable consumer goods, which usually decline during a recession, were virtually as large during the first half of 1949 as during the first half of 1948, the fact that expenditures by business concerns on plant and equipment, which also usually decline during periods of recession, were slightly larger during the first half of 1949 than during the first half of 1948, the fact that total expenditures on new construction in the second quarter of 1949 were slightly larger than in the second quarter of 1948, and the fact that government purchases of goods and services in the second quarter of 1949 were 25 per cent greater than in the second quarter of 1948.

The mildness of the recession is indicated also by the fact that corporate profits, when properly stated, are higher than a year ago

and almost as high as during the last quarter of 1948. When profits are correctly stated, corporate earnings in the second quarter of 1949. were 10.9 per cent above the second quarter of 1948 and only 10.4 per cent below the last quarter of 1948. In view of the facts that industrial production in the second quarter of 1949 was 8.7 per cent. below the second quarter of 1948, that hourly earnings in manufacturing were 4.8 per cent higher, and that selling prices were lower, the success of managements in keeping up profits is a remarkable achievement.

Why A Depression?

What is the nature of the recession? If retail sales are about as large as last year, if expenditures on plant and equipment are as large as last year, if expenditures on new construction are as large as last year, if the government purchases of goods and services are larger than last year, why is there any depression at all?

The immediate explanation of



Current recession is partly due to cut in inventories



Consumer buying has held up well

the recession has been the desire of business managements to cut commitments and inventories as soon as the increase in supplies and the growing reluctance of consumers to spend caused prices to de-The year 1948 had been cline. a year of heavy accumulation of inventories. The physical volume of non-farm inventories increased about \$5,100,000,000, or about 10 per cent. Inventories were low in Irelation to sales by pre-war standards but, at the first sign of weakness in prices, managements became very anxious to cut inventtories. As a result, new orders for mon-durable goods in March, April, land May, 1949, were nearly 15 per cent below the same months of last year and new orders for durable goods more than 24 per cent below.

Inventory Fears

With retail sales running about the same as last year, industrial production in the first quarter of 1949 was 2.4 per cent below the first quarter of 1948 and in the second quarter was 8.7 per cent below last year. Inventories accumulated in the first quarter, but were reduced during the second quarter. Most of the rise in unemployment between June, 1948, and June, 1949, is accounted for by the drop of over a million in employment in manufacturing between those dates. In short, the recession up to now has been almost entirely the result of an attempt of business concerns to adjust their



inventories to the changed outlook for prices and, in terms of employment, has been confined almost entirely to manufacturing.

Mildness Explained

Why has the recession been so Perhaps the answer will turn out to be that a serious drop in business is ahead, but that it has not had time to develop. Much of the activity in the durable goods industries, for example, has been based upon orders placed a year ago or even two or three years ago. As the backlogs of orders in the durable goods industries are eliminated, the rate of production and employment will drop, unless new orders increase. It is normal for production in the durable goods industries to hold up in the early months of a recession better than output in the non-durable goods industries. Consequently, the behavior of the durable goods industries up to now has been normal and does not assure that a sharp drop is not ahead.

There are four principal reasons for mildness:

- 1. The backlog of orders in the durable goods industries has been large enough to sustain employment at a high level for some months after the decline in new orders.
 - 2. The cut in the personal in-

come taxes helped incomes at the time when consumer buying was leveling off. The cut became effective at just the right time — shortly before prices began to decline

- 3. There was a large increase in government expenditures during the latter half of 1948 and the first half of 1949 in comparison with the previous years. Expenditures by state and local governments also increased.
- 4. Inventories were small in relation to sales, and the short-term debts of individuals and business concerns were small in relation to their incomes. Hence there was little pressure on debtors to pay their debts and virtually no forced liquidation or distress selling.
- I do not think that the recession will be severe or that it will last much longer. The upturn is likely to start before the end of 1949 and in any event by the Spring of 1950.

One important reason for be-(Continued on page 30)

SPEECH OF THE MONTH

Made before the International Apple Association, August 11, 1949



Ewing Galloway photos

Business needs to persuade consumers to cut savings rate

Ewing Galloway

This Fall most students will again be carefree collegians

By DANIEL F. NICHOLSON

HE American college campus will look different this Fall and the changes will be more than superficial. There will be fewer baby carriages and fewer dead-earnest scholars in their early thirties. Instead, most students will again be the carefree collegians whose profoundest thoughts would seem to revolve around Saturday's football game. Ex-G.I. Joe is fast disappearing from the campus; by Fall, his numbers will have so dwindled that the typical American college will be able to settle back to a more normal, and restful, way of life.

University authorities regard the veterans' departure with mixed feelings. On one hand, they are unanimous in praising the G.I. stu-

dent. He raised scholarship standards, largely because he was in such a hurry to make up lost time. Married veterans bolted down eduEnd of an

cation in great gulps, intent upon grabbing a diploma and getting on to a job that would pay more than the government's "subsistence." Professors will miss their pace-setting leadership.

Some Benefits Seen

On the other hand, the decline in veteran enrollments will benefit higher education as a whole. The tremendous influx of G.I.s pumped: college enrollments to the bursting point. Almost without exception, the institutions of learning made sacrifices to accommodate the veteran. Emergency housing sprange up on campus greens; classrooms and professors both did double duty; entrance requirements were tightened and applicants screened. more carefully to hold enrollments to manageable maximums; news buildings were constructed and abandoned structures turned back into classrooms. Many schools established branches to handle the overflow. The upshot was that many a university which depended upon endowment income to provide a large portion of the cost of educating a student suffered a financial set-

Though the physical demands of student veterans were difficult enough to meet, an even tougher, and clearly more essential, job was to provide students with instruc-

Baby carriages, too, will disappear from college greens.



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Era: G. I. Joe Leaves the Campus

America's Colleges Anticipate A "Return To Normalcy"

tion by qualified teachers. As one educator put it, "Competent teachers and scholars are not made overnight." Thus, the schools scraped bottom in their search for good instructors. They competed not only with each other, but also with the more attractive pay offered by industry. Big schools hired teachers from smaller colleges, and all put more graduate students at work teaching classes.

Teaching Chores Eased

Even though a remarkable job was done in providing instruction, few educators will mourn the passing of the "marginal teacher." They are also pleased that faculty scholars who have toiled under teaching overloads of 40 to 50 per cent can return to the scholarly life, meaning free time for the study, research and writing that are a basic part of a university's contribution to the community.

The G.I. and his government-paid tuition will be missed by many schools, but the effect may be only temporary and hardly serious. A case in point is Chicago's Roose-velt College, which grew up with the G.I. Bill. Begun in 1945, Roose-velt's enrollment swelled in three years to a phenomenal 6,080. This year, with veterans down to 17 per cent of new student registrations (35 per cent last year), the total

enrollment at Roosevelt is still expected to be only about five per cent under the 1948-49 peak.

Northwestern's retired President Franklyn B. Snyder points out that, despite the passing of the G.I. era in education, young Americans are still swarming to college "at a rate undreamed of before the war." And, he adds, "A large part of the growth would apparently have taken place in the normal course of events. The years just before the war showed increasing numbers of high school graduates going on to college and established a trend which the sudden return of the veteran in 1946 merely accentuated... It seems indisputable that higher education must accustom itself to dealing with many more students than were in college before the war."

Old Problems Again

There's a distinct difference, however, between the demand for education that comes from the ordinary civilian and that coming from the veteran. The schools recognized an obligation to accommodate the veteran, but they will feel no such obligation towards the civilian. Hence, it can be expected that tight entrance requirements will continue to restrict higher education to conscientious scholars.

A return to normalcy in higher

Acme

education has a number of significant implications. It means greater concentration on goals that educators have always sought but which were overshadowed by the problems of the hectic postwar years. Some of these problems remain: the low rate of return received from endowment funds, the high cost of constructing badly needed buildings, and the rising salary costs that must be met if instructors are to be retained against the competition of private business.

More Government Control?

Educators are even more concerned, however, with what they regard as a growing threat to academic freedom, particularly the threat of government control inherent in federal subsidies to educational institutions. The threat has been the crux of many a speech and commencement address. The Very Rev. James T. Hussey, S. J., president of Loyola University, in (Continued on page 50)

Teachers will have more research time
Ewing Galloway



Huge GI influx strained housing facilities to breaking-point







Industrial Tape Corporation salesmen getting training by "role-playing"

Teaching Salesmen By Dramatics

NE of industry's most successful training devices, called "role-playing," is much like the kindergarten game in which youngsters play the roles of such grownups as locomotive engineers and airplane pilots. Although the roleplaying idea is not new, there are still few, if any, devices that are as effective in educating individuals of all ages.

Today, a handful of leading concerns are experimenting with a highly-developed sales education version of the role-playing principle and their experience thus far indicates they may have one of the best ideas yet for training new salesmen and stepping up the efficiency of experienced men. Already, the new program has produced a number of convincing performance records.

The essence of the role-playing idea is simple. Trainees, whether salesmen or factory foremen, actually act out, under trained supervision, realistic situations they are likely to confront in their work. Customarily, the acting takes place

before a group of other salesmen whose job it is to pick holes in the technique and, if possible, improve upon it themselves.

All Phases Of Work Covered

Under the new plan, however, salesmen do more than act out the job of selling a prospect. In addition, other essentials of effective selling — the handling of complaints, prospect selection, the handling of merchandise displays, and the like — are all demonstrated through role-playing. Companies which are using the idea believe this acting out of the salesmen's job, in all its details, has been chiefly responsible for a number of subsequent sales increases.

The new role-playing technique bears little resemblance to the type of sales clinic in which a sales manager simply challenges his men to "sell me" and then presents them with a number of sales-resistance arguments, some of them far from realistic. Instead, the new method presents a practising salesman with realistic selling condi-

tions; the "customers" he undertakes to sell do not confront him merely with sales-resistance arguments; rather, they are trained to reflect the actual problems of actual dealers, thus preparing a salesman to cope with similar problems when he is in the field.

One firm using the new training idea is the Industrial Tape Corporation (a Johnson and Johnson subsidiary) at New Brunswick, N. J. There the program started this way:

First, a comprehensive manual was compiled detailing each step in the work of an ITC salesman: what he must know about products, how prospects are selected, how interviews are opened and kept moving, how complaints are handled, how sales are closed, and a variety of other specialized phases of the salesman's job.

Study Nights-Rehearse Days

Each week-long ITC training session has followed the pattern set by the manual. At night, a group of eight to 14 participating salesmen study a section of the manual; next morning, they are quizzed on the subjects discussed and the rest of the day is spent acting out typical situations suggested by the manual.

During these clinics, a company man portrays the prospect. His job is to confront the role-playing salesman with situations that will test

(Continued on page 39)

Illinois' Billion Dollar Enigma

All Agree The Problem Is Acute, There Agreement Ends

IKE a business that failed to protect its future by laying aside reserves for replacing worn out equipment, the state of Illinois is liberally ribboned with worn out, obsolescent highways it hasn't the money to replace.

Illinois is not unique in this respect. Many other states are in the same position. The government stop-order on all except the most essential road building during the war emphasized highway shortcomings that were becoming apparent before Pearl Harbor. Under the double punishment of heavy wartime traffic and lack of normal construction, the state primary system at the end of the conflict was, and still is, down at heel.

Road construction prices have been no exception to the general post-war markup. The combination of higher prices, and thicker more expensively designed roads necessary for fast-moving traffic and large trucks has booted the cost of rural highways to almost double the pre-war figures. In 1940, the state paid an average of \$58,000 a mile for concrete highways 22 feet wide, steel reenforced, and nine inches thick, the highest type of road built at the time. The average price last year for a 24-foot, concrete pavement, steel reenforced and ten inches thick, the new standard, was \$104,000 a mile.

Prices Skyrocket

Year by year since the planned system of Chicago expressways was laid out, price calculations have gone up. In the early years considerable changes in design specifications were made, and these, added to construction price increases, have boosted the latest cost estimates for the west (Congress street) expressway 225 per cent over the original estimate in 1939.

Price increases alone, however, have made tremendous changes in the estimates in recent years, when designs were fairly well frozen and revisions in plan had comparatively little influence on cost calculations. Thus, cost of the west route from South Lake Shore drive to the Cook-Du Page county line was estimated in 1944 at \$69,224,000. The last estimate, made in 1948, was \$95,731,000.

Estimate For Northwest Route

The first complete estimate for the northwest route, including Edens Parkway, the Erie street branch to North Michigan avenue, and a connecting spur to the new international air terminal at the Douglas-Orchard airport site, was made in 1946, after the big boom in prices was well under way. Consequently, the difference between the first estimate of \$116,400,000 and the latest of \$120,519,000 made in 1948, is not so great.

Maintenance costs have also zoomed in recent years, and now threaten to absorb road revenues at a rate that will leave no money for new construction in the not too distant future. In 1939, the state highway department spent \$5,986,365 for maintenance, an average of \$449 a mile. Last year, maintenance expenditures were \$17,380,143, an average of \$1,229 a mile. The department estimates





A cloverleaf and a bridge and station for the proposed Congress street development

maintenance will cost \$21,000,000 in 1950.

The state road system is in very poor condition measured by any reasonable standard. While that fact has been widely publicized, the plight of Illinois cities, burdened with inadequate streets, has been passed over lightly, but is equally if not more critical, according to a report to the last session of the legislature. An effort to raise the 3-cent per gallon gas tax, adopted in 1929, to 5 cents was the session's hottest issue. The bill was defeated a few days before the session's end.

Problem Unsolved

Not even the opponents of the tax increase, however, regarded its defeat as a solution to the road problem, or the end of the battle. The issue, affecting as it does some 2,200,000 vehicle owners registered in the state, is still one of the hottest in Illinois, practically and politically. It is practically important because of the undisputed fact that the roads and streets are far below par, and something must be done about them. It is politically important because of a total lack of agreement about what is to be done, who is to pay for the doing, how much is to be spent, and where.

Because the situation now has changed little from that which existed at the time the 5-cent gas tax battle started, except for further deterioration of roads, a review of the nickel tax controversy is of interest, because it will serve as a guide to the future.

The first complete report on the condition of all roads and streets in Illinois was completed nine months ago by Griffenhagen and Associates, Chicago consulting engineers. It was prepared with the assistance of the state highway department, the superintendents of highways of the 102 counties, rural road commissioners in 1,569 townships and road districts, and street authorities in most cities.

The report was ordered by the Illinois Commission on Highway and Traffic Problems, which was created by the 1947 legislature, and charged with reporting to the 1949 session. Members of the commission, which sat in the interim period between the 1947 and 1949 sessions, were five state representatives, five senators, five public members appointed by the governor, the speaker of the House, and the lieutenant governor.

Final Total \$5,500,000,000

It was an exhaustive study. The report calculated that to correct deficiencies on the 124,185 miles of roads and streets in the state, from country lanes to Chicago boulevards, would cost \$5,500,000,000. In evaluating needs at that staggering figure, the engineers reported no utopian standards had been adopted as goals. It had not been assumed that every little used

country road should be paved with four lanes of concrete, or that every city street should be a wide expressway.

"By far the most serious aspects of the present highway problem is this accumulated deficiency in all systems," the report warned. "Much of this is of several years standling. That fact that about \$2,250,-,000,000 is needed right now to correct existing highway shortcomings is alarming. It indicates some radical steps must be taken in the management of the state's highways to improve the roads and streets over a reasonable period, instead of allowing them to get intworse condition year after year."

The study covered phases of the highway problem aside from the physical condition of the pavements. It probed the possibilities for financing future construction, analyzed income under the 3-cent tax to discover what portion of the income was paid by each class of highway user, and made recommendations for considerable revision in road administration and management.

The engineers, of course, were unhampered by political considerations. They reported findings, and made recommendations, that bruised the toes of some groups with special interests in roads. They recommended abolition of the jobs of the 1,569 township and road district commissioners, suggesting that the local roads administered by them could be more efficiently run by the county highway superintendents. Farmers are jealous of local prerogatives in dealing with road construction and taxation. The township road officials are important politically, and interested in keeping their jobs.

Payment Per Ton Mile

Passenger car drivers, the report said, pay nearly four times as much as trucks in gas taxes on the basis of ton miles of travel—that is considering the weight of the vehicles, and the number of miles they travel. Moreover, it pointed out inequities in license rate fees as between certain truck classifications.

Financing was the main issue in the situation. Highway users, the report said, should pay all the cost of the state primary system,

(Continued on page 26)

Improvement of Wacker drive now under way will cost \$1,052,000 for the first block





Retorts for extracting thorium



Dr. Howard Kremers, Lindsay Light research director, examining radioactive ore

Atomic Understudy

Thorium: A Second Source of Atomic Fuel and Bombs?

N VIENNA some 60-odd years ago, a young chemist named Karl Auer was trying to sell his latest invention to a prominent engineer. Taking from his pocket a curious, stocking-like gadget impregnated with thorium, Auer explained, "Place this in a gaslight flame and it glows brightly, giving off a better, more diffused light."

The engineer listened in silence. Finally, he broke off the explanation: "In my works we take notice only of serious ideas."

The interview was something of a landmark in the up-again-down-again history of the obscure metal thorium. Auer, unmoved by the engineer's skepticism, went back to his laboratory, worked night and day for months, and finally placed in production (with money raised by a stock issue he, himself, floated) the world's first gas mantle. Soon afterwards 40,000 people were at work producing the new lighting device and Auer was on the road to fabulous wealth. The Emperor Franz Joseph made him

By GEORG MANN

a baron, whereupon he chose the title Baron Auer von Welsbach — a name that brings memories to older Americans who can recall touching a match to a Welsbach mantle.

Gas Mantle Era

Although the gas mantle gave thorium its first real importance, it was only temporary. As the mantle era waned, the chemical that made it possible sank back into oblivion. That, however, was before the Atomic Age. Today, thorium appears to be on the threshhold of a new era that may give it vastly greater importance than even young Karl Auer ever dreamed of.

The first hint of thorium's new lease on life came in 1945 when Canadian Prime Minister Mackenzie King told his House of Commons, in what amounted to a side remark, that Canada's big Chalk

River atomic project was exploring the use of thorium as a source for atomic energy. As one science editor wrote at the time, "This was the first hint of large scale experiments with elements other than uranium."

The rebirth became more apparent early in 1947, when the staid Physical Review carried a brief notice buried on the back page of experiments conducted five years previously by Dr. Glenn Seaborg and a team of atomic scientists. Seaborg reported that thorium could be used as the basis for making atomic fuel. He and his co-workers had bombarded thorium with the heavy atomic particles called neutrons, starting a series of changes which ended with uranium 233. Like its heavier brother, U-235, U-233 could be used for atomic fission, for energy or for the bomb.

In sober, undramatic language

Seaborg wrote, "Since uranium 233 is formed as a result of absorption of neutrons by thorium, it is possible to use non-fissionable thorium as a nuclear fuel source indirectly through fissionable uranium 233."

Shortly after Seaborg's report, the Atomic Energy Commission swung into action, clamping strict controls on both uranium and thorium. At home, the AEC allows a limited amount of commerce in such thorium-containing items as gas mantles, refractories, ceramic products, and glass, but exports are carefully watched and all foreign importers are scrutinized. The AEC knows that gas mantles are vital to many countries, particularly where they are used with gasoline or kerosene lamps. Nevertheless, the atomic administrators want to make sure that no buyer in Turkey, say, is buying a couple of million gas mantles and shipping them to Russia, where the thorium could be extracted.

Soft In Pure State

Thorium in its pure state is a soft metal that looks like platinum, but atom for atom is considerably heavier than lead, and 11 times heavier than water. It can be formed into wire or sheet. Newly refined, it has a bright, lustrous surface that dulls when exposed to

air. Ordinarily, thorium turns up most often in the form of colorless salts or in other compounds.

The ferris wheel history of thorium is reflected by the career of Lindsay Light and Chemical Company of West Chicago, Ill. Lindsay Light Company, the original name, was founded by Charles Lindsay. Ir., a salesman for the Welsbach Company. At first it merchandized mantles, exclusively, but after the Welsbach patents ran out, it began to produce thorium nitrate, the principal chemical in the mantles. By 1916 it was processing monazite sand, the main thorium ore. Business boomed during World War I for the British were buying thorium at \$10 a pound.

Markets Lost

During this period, there was little interest in that strange group of chemicals called the rare earths, the chief minerals in monazite sand. These were thrown away or sold in drug store amounts to laboratories and other users. Then, squeezed by the impact of electrification, the market for mantles began to narrow and Lindsay chemists began working on possible uses for the rare earths. The work was slow, but eventually the rare earth side of the company's operations had grown to the point where thorium, itself, became a nuisance.

The atom bomb changed this situation overnight!

Today, Lindsay Light andl Chemical is the nation's leading: producer of both thorium and the rare earths. Its growth since Pearl! Harbor has been almost meteoric. During the slow prewar years, its stock hit a bottom price of around! 75 cents a share; by 1945, it sold for 51/8 and by 1948, it had zoomed to the 70's. It now stands at \$45 a share. Whereas Lindsay processed six or seven hundred tons of monazite sand a year prewar, it now produces around 2,500 tons a year. Meantime, the price of monazite has climbed from \$60 a ton in 1945 to \$145 in May, 1949.

The atom has spurred the search for new thorium sources. Brazil and India are still the two main producers of monazite sand. In its peak production, 40-odd years ago, Brazil shipped 7,000 tons abroad. That marked the high point of the gas mantle era. In 1945, Brazil shipped around 2,000 tons, India around 3,000. In the U. S., the sands are found in Idaho — where Lindsay gets some of its raw material — in newly discovered areas in Florida, and in longer known deposits in the Carolinas.

Monazite, unlike white beach sand, is cinnamon brown in color, five times as heavy as water, and relatively hard. The Brazilian monazite contains around six to eight per cent thorium. The processing is difficult; the exact methods are trade secrets.

Other Uses

Apart from the gas mantle, thorium has other important industrial uses. It might have more, but manufacturers are leary of depending on any substance that may suddenly disappear from the market because of military necessity. They remember how certain types of dinnerware lost their popular red colors when uranium use was restricted.

As a pure metal, thorium is not particularly important commercially. But its sales and chemical compounds enter into many products. The licensed production of thorium compounds, according to the AEC is running about 36,000 pounds a year. The tube in your radio probably works better because metallurgists have found that



(Continued on page 28)

SEPTEMBER, 1949



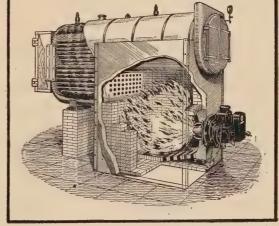
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Illinois' Billion Dollar Enigma

(Continued from page 22)

through gas taxes and license fees. Property owners, it added, should pay part or all of the cost of roads and streets of other classes, either through direct taxation, or special assessments. Direct taxes, of course, are now levied. The report suggested that they be increased. Special assessments, in disrepute since the real estate debacle of the depression thirties, have been almost unheard of in Illinois since that time.

The engineers proposed that property should be assessed 46.7 per cent of the cost of county highways, 55.2 per cent of the cost of city streets, and all the costs of township, or local country roads, a recommendation very unpalatable to farmers.

The most equitable basis for setting truck license fees, the report said, is the ton-mile system. Such a system is complicated to set up, so considerable increases in truck license fees on the flat rate scale were proposed as a stop-gap pending development of a tonmile assessment system should it be adopted.

Finally, the study proposed a 5cent per gallon gas tax.

Agree and Disagree

The commission, when it received the report in November, 1948, was faced with a problem differing greatly from that of the engineers. The commission's job was complicated by political considerations. The program it proposed to the legislature had to be calculated to survive the legislative mill. The commission held numerous public hearings at which spokesmen for farmers, township officials, oil companies, truckers, and others gave their viewpoints. Everybody agreed the state's roads were in bad shape, but they saw eye to eye on little else.

Late in February, the commission made a report to the legislature that was a hard-fought compromite. The rural population came out with a long sought prize - a recommendation that a share of the gas tax revenues be as-Unsigned to township roads. changed since 1929, the 3-cent gas tax law divides revenues equally among the state, county and municipal road building agencies. The state gets one-third outright, the counties divide one-third on the basis of their automobile registrations, and the cities divide onethird according to population.

For years rural areas have wanted: part of the gas tax for local country roads, which are regarded by highway authorities as local responsibilities, like residential streets in cities. Defeated in attempts to a: gas tax cut in the 1945 and 1947 sessions, the downstaters nevertheless succeeded in getting \$7,500,000 a year appropriated from general revenues for township roads, at both sessions.

The downstaters were in control: of the commission. When the time: came to decide on a split of the 5-cent tax, they started out wanting more, but eventually agreed to settle for a 121/2 per cent allocation of revenues for townships.

The commission recommended that of the remainder, 371/2 per

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cent go to the state, and 25 per cent each to the counties, and to the cities. That distribution it was estimated would give the state \$31,938,007; the counties and cities \$21,292,004 each; and townships \$10,646,002. In 1948, the 3-cent tax produced revenues, after rebates to non-highway users - industrial consumers, farmers burning gas in tractors, and the like of \$50,686,062, or about \$17,000,-000 each to the state, the counties, and the cities. The townships got \$7,500,000 from general revenues but none from the gas tax.

New license rates were recommended to boost passenger car fees \$3,800,000 and truck and bus fees \$4,000,000 a year. Other minor tax increases were proposed, the whole program involving new revenues of \$44,400,000 annually.

Tax Hikes Killed

Some of the minor bills among the 23 introduced to carry out the commission program, got through the legislature. The major tax increase bills were defeated. For over three months the downstaters held out against all attempts to persuade them to accept a smaller share of the gas tax than 12½ per cent, so that a formula more favorable to the counties and cities, particularly Chicago and Cook county, could be worked out.

Nine days before the session ended, they agreed to accept 11 per cent. The state's share was reduced to 36 per cent, cities were increased to 30 per cent, Cook county, eligible for practically no income from the township allotment, was given a separate share of 11 per cent, and all other counties were given 12 per cent. In that form, the bill passed the senate with 27 votes, only one more than it required, but the long delayed compromise came too late to save the bill in the house.

Governor Adlai Stevenson's administration gave the bill powerful support in the senate. A week later it was smothered in the house. The Chicago Democrats voted against it, along with the downstate Republicans.

Speculation about the shape of future efforts to get the revenues necessary if Illinois roads are to be put in reasonably good condition and kept there centers principally



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(Incorporated 1905) 20 SOUTH PEORIA STREET CHICAGO 7, ILLINOIS, U. S. A. around the farm bloc. Downstaters failed in trying to pass another \$7,500,000 a year appropriation from general revenues, and with the defeat of the 5-cent gas tax bill, were left without state aid for township roads. Whether they will vote for any increase in the gas tax that does not give them a share in the revenues remains to be seen.

Currently, there is a proposal for a 1-cent increase in the gas tax. All of the new revenue, under this proposal, would go to the state, which would be required by terms of the law to spend the added income on about 2,800 miles of highways on the primary systems comprising the routes most commonly used by commercial haulers.

The 1-cent plan, less ambitious than the 5-cent proposal, is designed to improve the main rural highways, and is not advanced as a solution to the problems of counties, cities or townships, except that it contemplates greater spending by the state on primary route extensions within cities.

Atomic Understudy

(Continued from page 24)

two per cent of thorium added to the tungsten filament improves per-Thorium oxide can formance. withstand temperatures up to 5,000 degrees F., making it useful in crucibles and refractories where such metals as platinum are melted. Thorium oxide improves high quality optical glass. In electronics, thorium has important qualities, including a high degree of "electron efficiency," i.e., it gives off a good many electrons when heated. This quality is valuable in photoelectric cells which can turn not only visible light, but sun-tanning ultra-violet rays into an electric current. These properties have won for thorium the attention of Westinghouse Electric Corporation chemists, who have developed various methods of producing thorium through electrolysis.

Any discussion of thorium must return, of course, to its importance in atomic energy. According to the Smyth report, thorium was an even-odds candidate for making the A-bomb in the early days of the Manhattan project. Although it was finally discarded in favor of U-235 and plutonium, there are experts who believe it would in the long run be cheaper to obtain fissionable material from thorium than from uranium.

For one thing, there are 12 parts of thorium in every million parts of the earth's crust, compared to only four parts of uranium. The processing of thorium might be simpler, and currently working atomic piles could readily transform the thorium into usable materials. In the process, thorium, bombarded by \$10 w neutrons,

would be changed into thorium 233 (its ordinary atomic weight is 232.12). In a few hours, the thorium changes into protoactinium 233 — like thorium itself, radioactive. After a few days the protoactinium changes into U-233. This form of uranium is practically unknown in nature, but undergoes the fission which marks both the bomb and atomic fuels.

These facts have made thorium sources only second to uranium as a goal for the eager prospectors; who are fanning out all over the world. Dr. Howard E. Kremers, Lindsay Light and Chemical's research director, now receives several letters a week from prospectors; looking for new deposits of monazite sand. And even though thorium is merely on a "stand-by" basis in the current program of the AEC, prospectors in other countries are looking for new deposits.

War Scare

U. S. scientists are keeping a close watch on these developments. Their biggest scare came during the closing days of World War II, when the big question was how close the Germans had come to breaking the secret of the atomic bomb. In Paris, members of the scientific expedition called "Alsos"-which kept advancing close behind the troops-were horrified to learn that a German chemist had walked off with all available thorium. Then, as the Americans moved into Germany, they picked up the chemist and, after much questioning, he confessed his interest in thorium. He worked, he said, for a chemical concern that EPTEMBER, 1949

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was looking a head for postwar markets and had developed a special toothpaste formula using thorium oxide. It would work much like peroxide in whitening teeth. And an advertising program hooked around "Radioactive thorium," they felt, would even outdo the "irium" people.

The British are intensely interested in thorium. Recently, Dr. Frederick Soddy, one of the world's most brilliant chemists, patented what is said to be a new and improved method of removing thorium from monazite sand. Through a tacit agreement, the British have exploited the Indian monazite deposits, and the U.S. has concentrated on Brazil. The Indian deposits are centered in Travancore, a province located on the west side of the Indian peninsula. Recent reports indicate the Frenchwhose atomic program is under the domination of the Communist Frederick Joliot-Curie – are also working to get control of the rich Travancore monazite reserves.

Asia appears to be rich in thorium. Some of the richest deposits

are found in Ceylon, in a minera called thorianite. Unlike monazit. sand, it's more than half thorium The Dutch East Indies have other workable thorium, and the Au stralians also are busy trackin; down deposits. Thorium is also scattered through the rest of the world - in the Belgian Congo, in Madagascar, in Norway, and in the vast rambling areas of the Soviet Union. Although official state ments are few, the Soviet scientis Dr. S. P. Alexandroff, speaking in private debates in the U. N., has said there is great hope in the "enormous possibilities of produc ing thorium as a by-product of heavy sands from mining operations, say in Alaska or Siberia."

The chemical that built a fortune for an Austrian has come a long way. And while officers of the Lindsay Light and Chemical Company aren't saying much there's a light, not purely chemical that comes into their eye when thorium is discussed. The third stage in the history of the metal promises to be its greatest by far

Forecast: Fair

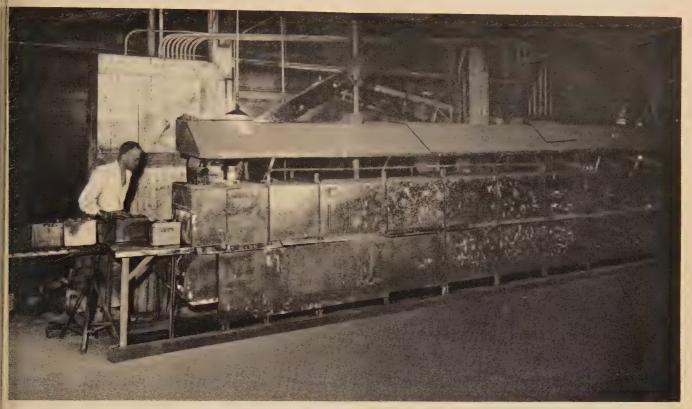
(Continued from page 17)

lieving the recession is near its bottom is that consumption has been outrunning production since approximately the end of February. A second important reason for expecting an early upturn is that the proportion of personal incomes spent on consumer goods, which dropped from the last quarter of 1947 through the first quarter of 1949, has begun to rise and will undoubtedly continue to rise. The rise in the second quarter of 1949 was equivalent to an annual increase of \$2,700,000,000 in the expenditures for consumer goods. A third reason is that the cash payments of the federal government during the next few months or more will be exceeding the cash receipts at the rate of about \$3,000,000,000 or more a The excess of government vear. disbursements over receipts may be expected to mean rising incomes and expenditures in the economy as a whole - since part of the government deficit at least will undoubtedly be financed by the creation of money by the commer-

cial banks. A fourth reason is that industrial production has now been dropping for ten months and in most recent recessions the decline in industrial production has lasted only about a year or slightly more.

The principal uncertainty in the short-term business outlook arises from the possibility that the output of durable goods will drop substantially below present levels. Thus far the production of durable goods has held up fairly well - in June it was 16 per cent below the December, 1948, peak. In considerable measure, the high production of durable goods represents the large output of automobiles. Rapid progress is being made in meeting the large accumulated demand for automobiles. In the near future a fairly substantial drop in the demand for cars is likely. If the output of durable goods drops well below present levels, the probability is considerably increased that the upturn will not start until early in 1950,

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It is convenient to examine the short-term business prospects under three headings: One, non-durable goods; two, construction; and, three, durable goods.

The output of non-durable goods has been dropping for 10 months, but expenditures for non-durable goods were as large in the first quarter of 1949 as in the first quarter of last year and in the second quarter of 1949 were only 4.5 per cent below the second quarter of last year. The physical consumption of non-durable goods has been about as large in 1949 as in 1948. Consumption has been well above production since the end of February. In view of the fact that inventories were not large at the beginning of the recession, the output of non-durable goods ought to begin to rise in the very near future - probably before the end of the third quarter and certainly before the end of the year.

Construction Outlook

Construction is one of the bright spots in the economic picture. One should be reminded that the postwar boom of 1947 and 1948 did not generate a high rate of construction. Consequently, the general level of production was not particularly dependent upon the maintenance of the prevailing rate of construction.

The backlog of demand for housing is very large. The proportion of families living doubled up is still abnormally high. Much of the demand during the last three years has been met by temporary housing or by subdividing existing houses. Neither method is more than a stop-gap solution to the housing problem. A strong demand for housing is likely for several years, especially if the price of houses can be moderately reduced.

Public construction is the brightest part of the construction outlook. In the first half of 1949, the value of public construction put in place was 37 per cent above last year, and, in the three months ending in May, contract awards for public construction were also 37 per cent above the corresponding period of 1948. A volume of public construction considerably above the level of 1948 is assured for the rest of 1949.

The principal doubts about the short-term business outlook arise

from the possibility that there will be a further substantial drop in the output of durable manufactured goods. The present level of business depends to an unusual extent upon the demand for automobiles and for industrial equipment. In 1948, for example, the output of durable producers' goods represented 7.9 per cent of the gross national product in comparison with 6.2 per cent in 1929 and 5.2 per cent in 1939.

The urgency of the demand for passenger automobiles has been dropping for some time and will continue to drop. For over two years the prices of cars were too low to equate supply and demand: It remains to be seen how much longer the present output of cars can be sold at present prices. My guess is not much longer. Either output or prices will have to be cut. The number of over-age cars, however, is still very large. The average age at which cars are scrapped is about 12.5 years. In midyear 1948 there were 5,200,000 cars over 12.5 years of age. Hence no great collapse in the demand for cars is imminent.

The present and recent high rates of buying of industrial equipment will not continue indefinitely, but no large early drop is likely. There were a number of years during the depression and the war when expenditures on equipment were less than the consumption of equipment. These deficiencies have not yet been made up.

New Machinery Vital

In the second place, during the period that replacements were below normal, much progress was being made in improving the equipment available for installation. In the third place, the fact that the hourly earnings of factory workers have risen 109 per cent since 1940, the level of wholesale prices exclusive of farm products and foods by 74 per cent, and the prices of manufactured goods by 86 per cent creates both the need and the opportunity to use more machinery and less direct labor in making goods. Consequently, the time has not arrived when most business concerns can afford to make drastic cuts in their expenditures for the purpose of cutting their operating costs.

Although a substantial drop in the production of durable goods is possibility, its seriousness should on the exaggerated. Less than one ut of every seven employed performs works in the durable goods injustries and the output of products' durable goods in the first quarter of 1949 represented only about 18 per cent of the gross national roduct. Hence a fairly large drop rould not be catastrophic.

Complete Recovery

How complete a recovery from ne present recession is to be ex-The high level of busiless activity in 1948 was partly hade possible by an addition of 6,500,000,000 to inventories. No omparable increase can be exected to accompany a normal re-Hence in order to attain he level of business activity of 1948, the total absorption of goods y consumers, by the increase of ndustrial plant and equipment, by he increase in residential buildng, by net investment abroad, and by government purchase of goods and services will need to be inréased by about \$6,500,000,000 above the level of 1948. In addiion, of course, the country must bsorb the output of a slightly arger and more efficient labor force. Full recovery would require a gross national product in 1950 of approximately \$270,000,000,000 at present prices. What are the prospects of achieving such a recovery?

The absorption of goods and services by local, state and federal governments may be expected to run about \$45,000,000,000, net foreign investment about \$1,000,000,000. This leaves \$224,000,000,000.

Can gross private investment in housing, plant, and equipment be raised within the next 12 months to \$40,000,000,000 a year and the rate of consumption to \$184,000-000,000 a year? Neither goal seems outside the range of practical The required rate achievement. of investment is not far above the present rate. Despite the fact that this recession has not been accompanied by a significant drop in expenditures on housing, plant, and equipment, a moderate expansion of investment may be expected to accompany the revival of business. Raising consumer expenditures to \$184,000,000,000 out of personal incomes after taxes of \$197,000,- 000,000 would require a drop in the rate of personal saving. the second quarter of 1949 personal consumption expenditures were running at the annual rate of \$175,000,000,000 and personal savings at the rate of \$18,000,000,-000. Consequently individuals would need to be persuaded to cut their personal savings by \$5,000,-000,000, or nearly 30 per cent. Raising consumption to \$184,000,-000,000 while cutting personal savings to \$13,000,000,000 obviously requires that business do a good job of offering consumers more at-

tractive goods at more attractive prices.

If consumption cannot be raised and savings reduced to the required levels, other ways of achieving complete recovery need to be developed. An increase in expenditures on housing and private plant and equipment above the \$40,000,000,000 a year would be only a stop gap solution which would create as many problems as it would solve because it would raise gross investment too far above the probable long-term rate. A solution of the problem of full recovery

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might be achieved by larger dividend disbursements by corporations and less reliance by corporotions upon plowed-back earnings for financing expenditures on plant and equipment.

Possible Pitfalls

Since there is good reason to expect the depression to be mild and to believe that the upturn is near, drastic action is unnecessary. It is important, however, to avoid certain mistakes, such as raising taxes, or raising wages under the mistaken notion that raising the price of labor is a way to sell more labor. It is possible, however, to stimulate business by simultaneously cutting government expenditures and taxes. Most important of all, it is possible by price cuts to stimulate the demand for goods and to accelerate the reduction of inventories and thus to pave the way for an expansion of production.

The precise economic problem created by the recession is to get individuals to spend a larger fracvion of their incomes for goods and to get business concerns to

cease reducing their inventories. For example, if individuals could be persuaded to spend as last year, the level of consumption expenditures (at present prices) would rise by nearly \$5,000,000,000 a year. There is no mystery about the way to get people to buy more goods. It is to offer goods at lower prices or to offer better goods at a given price. The actual drops in prices thus far have been greater than the over-all indexes of prices indicate, partly because some prices (such as rents), which have been artificially repressed, are still ris-

Nevertheless, managers should realize that business has done only a fairly good job of limiting the recession by reducing prices and that the community on another occasion will probably not tolerate such conservative price cutting as has prevailed in the last year.

Reducing prices and improving quality to limit the depth of the recession and to hasten the recovery is consistent with the policies needed to raise consumption sufficiently to produce a full and sound recovery.

Trends In Finance and Busines

(Continued from page 10)

costs, and stiff foreign competition Like many another industry, th fishing firms are turning to re search, adding their own funds t supplement the relatively small scale work of the Federal govern ment in their field.

One thing that irks fishermen that Uncle Sam spends \$7.04 fc each ton of farm output, only 8 cents per ton of fish caught. The fishing industry, being composed c many small units of limited re sources (about 4,000 shore establish ments, 8,000 large vessels of fiv tons or more, and 73,000 smalle craft) has been unable to affore extensive research. Now, however with government cooperation the industry is out to put itself or sounder footing. Studies are being directed at the possibilities of intro ducing new food species; an expedi tion is preparing to explore the resources of the Bering Sea and the Pacific off southeast Alaska, an other is studying tuna in Hawaii and another is studying resource off the New England coast.

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By DANIEL F. NICHOLSON

TILITY companies ordinarily can expect a moderate growth ate determined by the population growth of the communities they erve and the increased use of appliances, but the staid gas utilities are currently in a period of spectacular expansion.

The explanation for this phenomenon is the huge demand for natural gas for space heating. The natural product, cheaper than manufactured gas, is now also cheaper than its principal competitors coal and oil. Natural gas transported from oil fields of the southwest to Chicago by pipeline is subject to state and federal price regulation, and the price has remained steady while competitive fuels soared. In addition, marked progress has been made in the development of more efficient furnaces and conversion units for the burning of gas. So, to its original major virtues of convenience and cleanliness, gas for home heating now has the additional and all-important advantage of a comparatively low price.

Big Unsatisfied Demand

During the war and until recently, the gas companies have been unable to satisfy more than a small part of the demand for gas for home heating because the shortage of steel precluded the laying of new pipe lines to the natural gas fields. With the easing of the steel situation, active plans are now under way to build the lines.

Outstanding among the nation's gas utilities is The Peoples Gas Light and Coke Company, serving the City of Chicago and through its subsidiary, Chicago District Pipeline Company supplying gas to other utilities in the Chicago area in Illinois and Indiana. Peoples Gas is distinguished by the fact that it is completely integrated, owning not only distribution fa-

cilities but pipe lines and gas wells.

Peoples Gas achieved integration last December when, with the approval of the Illinois Commerce Commission, the company acquired complete ownership of the Natural Gas Pipeline Company of America and the Texoma Natural Gas Company. A minority interest had previously been held in both companies. Peoples Gas paid \$32,668,067 to obtain complete ownership.

Properties

Natural Gas Pipeline Company of America owns and operates two parallel pipelines transporting natural gas from the Panhandle and Hugoton fields of Texas and Oklahoma to Chicago, with a capacity of 510,000,000 cubic feet of gas daily. One of the lines was completed at the beginning of 1949.

Texoma Natural Gas Company owns 132,000 acres of gas leaseholds in the Texas Panhandle and supplies 50 per cent of the gas transported by Natural Gas Pipeline Company.

In July of this year Peoples Gas announced that it had filed an application for permission to construct a new pipe line from Chicago to Houston, Texas. The new pipe line, 30 inches in diameter as compared with the 24 and 26 inches of the two now owned, would ultimately have a capacity of about 500,000,-000 cubic feet of gas daily, or approximately the same as the combined capacity of the other two. Initially, however, it is planned to establish a capacity of about 340,-000,000 cubic feet, with additional compressor stations to be added later. The initial investment in the new pipe line is estimated at \$100,-000,000. James F. Oates, Jr., chairman of Peoples Gas, has announced that negotiations are under way to obtain natural gas reserves in the Houston area, and that commitments already have been obtained for the necessary pipe. The com-





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pany estimates that construction of the pipe line can be completed in a year.

The potential market for the company's space heating service is far greater than it will be able to supply even with the new pipe line in operation. In the city of Chicago, Peoples Gas has more than 900,000 customers, with only 50,000 now using gas for residential space heating. The actual potential, however, is in the 470,000 Chicago families living in one, two and three family dwellings. The present backlog of orders for space heating is approximately 25,000.

Limiting Factors

Several limiting factors must be considered in connection with market potentials. One is the fact that facilities built at present high costs require a higher rate for gas than those built at the low costs of the 1930's. Chairman Oates has indicated on several occasions that rates for additional increments of gas supply are receiving serious study.

A second limiting factor is the necessity for establishing natural gas storage facilities to meet winter peak loads, thereby avoiding the great expense involved in having a pipe line capacity sufficient for the peak demand. Peoples Gas has developed a natural gas liquifaction and storage plant and the Chicago District Pipeline Company has received Federal Power Commission approval for the construction of its first \$6,000,000 unit. The plant is designed for the storage in liquid form of about 400,000,000 cubic feet of natural gas at a temperature 260 degrees below zero.

The third major factor limiting the expansion of space heating service is the fact that pipe lines are not shut down when furnaces are turned down at night or shut off completely for the Summer. Peoples Gas has developed large markets for "interruptible" and "offpeak" gas sales. The interruptible sales are made at a low rate to industrial consumers during hours when "firm" customers are not using all the gas available to the company. The off-peak sales are made to commercial and industrial customers from April to October, when house-heating demand is lightest.

Peoples Gas has five plants for

the manufacture of gas, and ha followed the policy of continuing the use of the manufactured proof uct despite the cheapness of natura gas. Customers receive a mixture of 80 per cent natural gas and 22 per cent manufactured gas. The mixed gas is favored, the company states, for several reasons. One i that it reduces the drain on natura: gas reserves and on limited pipeling facilities. It also permits greates flexibility than if the company were entirely dependent on pipe line gas and is a source of supply in the event of failure of a pipe line. Fin ally, by keeping up its manufactur ing facilities and knowledge, the company is protected against the possibility that natural gas reserves might some day become inadequated In connection with the latter point the company believes the natura gas reserves available to it will be sufficient for at least several gen erations. The company also puri chases coke oven gas at a low price from four steel plants located in the Chicago area.

Prior to the \$32,000,000 plus in vestment in Natural Gas Pipeline and Texoma in December, Peoples Gas over a long period of years had not only financed its growth and investments without the aid of new financing, but had accomplished a major reduction in funded debt. From a peak of \$95,000,000 in 1932, funded debt was reduced \$38,600,-000, or 40 per cent, and at the end of 1947 common stock and surplus represented 59 per cent of total capitalization. This debt reduction, plus refinancing for lower interest rates, cut annual interest charges from \$4,457,000 to \$1,987,000.

New Capital Raised

Last year, for the first time since 1931, the company raised new capital. An offering of \$16,400,000 of three per cent convertible debentures maturing December 1, 1963, was made to stockholders. The stockholders or their assignees bought nearly 96 per cent of the debentures, and the balance was sold to an underwriter. The debentures are convertible into capital stock through December 1, 1953, at \$100 a share; thereafter and through December 1, 1958, at \$105 a share; and thereafter through December 1, 1963, at \$110 a share.

On December 15, 1948, Peoples

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Denver, Colo	. 1.70	1.30
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Gas arranged a bank credit of \$20,000,000, of which \$10,000,000 was drawn immediately. The remaining \$10,000,000, or any part thereof, may be borrowed on or before December 14, 1949. The bank loans are payable December 15, 1949, but the company may, at any time prior to that date, convert them into installment term loans bearing three per cent interest.

At the annual meeting of stockholders on April 7, 1949, Chairman Oates reported that consolidated long term debt and bank loans of the company and its subsidiaries aggregated \$137,739,061, while stock and surplus amounted to \$84,049,-233. The debt represented 62 per cent of total capitalization, against 38 per cent for stock and surplus. Additional financing will be required, of course, when the new pipe line is constructed.

Capital stock consists of 1,000,000 authorized shares of \$100 par value each, of which 656,023 shares are outstanding. Although a profit

was earned even during the depression years, dividends were omitted in 1934, 1935 and 1936. Payment in recent years were: 1942-45, \$4 share; 1946, \$5; 1947, \$5.371/2; 1948 \$5.75. The stock was placed on \$6 annual basis with the payment of a quarterly dividend of \$1.50 share on October 15, 1948. This stock is listed on the Chicago Stock Exchange and the New York Stock Exchange.

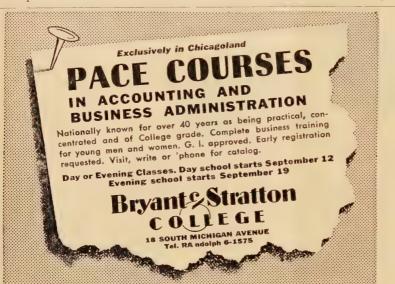
Although rate reductions were made in 1943 and 1946, gross revenues of Peoples Gas have rises to new peaks. Operation costs have also risen sharply, but off setting factors have included a reduction in gas rates by the Natural Gas Pipeline Company, on dered by the Federal Power Commission in 1942, and the saving in interest charges. Higher prices for by-products and residuals also have helped recent earnings.

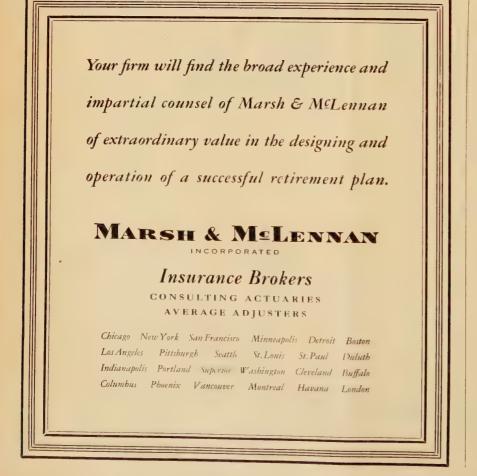
Revenue Gain

Revenues from gas sales totaled \$44,513,175 in 1948, against \$40,1277,476 in 1947. Other income from by-product sales, gas appliance sales, rents, interest, and dividends, brought total 1948 revenue to \$58,967,959, as compared with \$52,136,319 in 1947.

A non-recurring charge of \$1-000,000, or more than \$1.50 a share, caused 1948 net income to drop below that for 1947. The 1948 net was \$5,721,649, equal to \$8.72 a share, against \$6,577,794, or \$10.03 a share. These figures do not include the operations of the Natural Gas Pipeline Company nor those of Texoma Natural Gas.

The two new subsidiaries, Natural Gas Pipeline and Texoma, are making substantial contributions to the company's earnings. Consolidated net income for the six months ended June 30, 1949, was reported at \$5,468,868, equal to \$8.34 a share, an increase of \$1,302,019, or \$1.99 a share, over the like period of 1948. The 1949 first half net was reduced by a \$225,731 charge for amortization of the amount by which the purchase price for the stocks of Natural Gas Pipeline and Texoma exceeded the book values of the stocks. The net for the first half of 1948 was also reduced by a special charge, a reserve of \$750,-





Teaching Salesmen By Dramatics

(Continued from page 20)

is skill and resourcefulness, agreeng to buy only when the presentation deserves a sale. At times, the rospect is busy; at other times, e is angry or absent-minded.

In some sessions, salesmen underake to sell prospective new deal-rs. In this case the training lirector alone knows the size of he customer's store, his annual volume, and whether he carries ITC products. The salesman's job is to earn these facts and utilize them in making the sale.

To test a salesman's resourcefulness, the training director confronts aim with a series of typical selling problems. Half way through a bresentation, a trainee may discover hat the man he is talking to does not have authority to sign orders - a fact he should have learned at the outset. Sometimes the interview is interrupted by a customer appearing; the problem then being to resume the presentation skillfully when he has departed. At other times, the salseman may be confronted with product complaints, in which case he must handle them to the customer's satisfaction.

About two-thirds of the time of the role-playing is devoted to handling situations likely to arise while interviewing customers; the remaining third is spent in acting out phases of the salesman's work that are not conducted in the customer's presence. Typical examples are the preparation of reports and expense accounts the selection of leads, even the writing of distinct numerals.

Pay Base Rates

At most firms where the roleplaying idea is being used, salesmen are paid regular base rates while participating in the sales clinics, and in addition receive "commissions based on demonstrated sales ability."

Servel, Inc., at Evansville, Ind., is using the idea in conjunction with a series of slide films designed, among other things, to train a salesman to spot the "head of the house" and, hence, waste no time on anyone unable to make the final buying decision. The idea is that when a salesman observes, say, a mounted fish over the mantel

or a collection of hunting or bowling pictures on the wall, he had best aim his sales talk at the husband. A kitchen stocked with labor-saving devices or furniture anointed with doilies indicates that chief authority probably lies with the wife.

Selling Hints

Servel's slides also tell a salesman which features of the company's refrigerators to emphasize: modernistic furniture indicates an interest in modern design; solid, substantial furniture, an interest in long-wearing qualities; evidence of medicinals or an invalid in the family calls for emphasis on hygienic features.

Companies which are using the role-playing technique have seen considerable evidence of its effectiveness. During the initial quarter of this year sales of Industrial Tape's "Texcel" soared. ITC officials, reluctant for competitive reasons to say how big the sales jump

was in dollars, have nevertheless described it as "phenomenal." One result was that ITC extended the training plan to its Parmacel division.

Servel has found that the new plan has pepped up door-to-door salesmen. After a role-playing clinic for utility company salesmen in Minneapolis, sales of the company's gas refrigerators doubled. and Company reports a sharp drop in training costs. According to Swift, new salesmen once required up to three years to repay the cost of their training and indoctrination; with the new plan they "pay for themselves" in three to six months. The cost of training by the new role-playing method is estimated to be about one-sixth the cost of field training.

Though based on a simple technique, role-playing has been applied in various ways over the years. Psychologists have used the idea in mental hospitals where interns, as part of their training, watch specialists interview patients. Massachusetts Institute of Technology has done considerable research





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120 South La Salle Street, Chicago 3, Illinois PHIPPS INDUSTRIAL LAND TRUST — Owners on the technique in applying to foreman training.

A Chicago firm of industri training consultants, Poetzinge Dechert and Kielty, has worked on the application of the role-playing technique that is being utilized } Servel, Swift and International Poetzinger Corporation. Dechert and Kielty assisted thes firms in launching their training clinics by preparing the basic sald manuals and by training company men to serve as "customers" durin the role-playing clinics.

"Role-playing," declares PD&Ks senior partner, Floyd Poetzinger "provides a salesman with realistic experiences exactly mirroring fiels conditions, and at the same time gives an audience of company sales men the opportunity to project themselves into fluid situations co every variety without the expens. of field work and without tyin up supervisory manpower."

Early experience indicates tha the highly-developed role-playing technique is stimulating sales at time when good promotional de vices are at a premium. If so, technique that started in the kin dergarten and was improved upor in the university and psychological laboratory, may become the mean for producing tomorrow's bes salesmen.

Here, There and Everywhere

(Continued from page 8)

means that the new unit will use only one pound of coal to pro duce the same amount of electricity that older models used 2.6 pounds of coal to produce.

- Safe Fliers The nation's busi ness-owned air fleet, which has now increased to 7,000 planes, has a bet ter safety record than the sched uled air lines, according to the Corporate Aircraft Owners Associ ation. The fatality rate, per 200, 000,000 passenger miles flown, i one person killed in corporate planes as compared with 2.6 per sons in scheduled flights.
- More "Cold" Rubber Longer wearing "cold" rubber will be emerging from American plants a the rate of more than 185,000 ton a year by October, according to the B. F. Goodrich Company.



INDUSTRIAL DEVELOPMENTS

IN THE CHICAGO AREA

NVESTMENTS in industrial developments in the Chicago Indusrial Area during August totaled 6,819,000, compared with \$8,653,-000 during August, 1948. Total xpenditures in the first eight nonths of 1949 were \$67,752,000 compared with \$89,001,000 for the ame period in 1948. These develppments included new construction, expansion of industrial buildings, and the purchase of land and buildings for industrial purposes.

Rock-Ola Manufacturing Corpoation, which recently purchased a large piece of land adjacent to its bresent plant, will expand its plant by the construction of a one-story

building.

James Lees and Sons Company, Bridgeport, Pa., manufacturer of carpets, nylon, worsted and knitting yarns, is constructing a onestory building at West 51st street and South Major avenue in the Clearing Industrial District. Bowes Realty Company, brokers.

Carnegie-Illinois Steel Company will construct two sinter plants at the company's South Works, one at the foot of 83rd street in Chicago and the other at Gary, Ind.

Burny Brothers, Inc., 2747 W. VanBuren street, is constructing a large baking plant at Chicago avenue and Kilpatrick avenue. building, which will be a one-story structure of brick and concrete, will contain 122,000 square feet of floor area. L. P. Sumarkoff, architect.

Illinois Tool Works, 350 N. Keeler avenue, is constructing an addition to its plant in Elgin. The company makes metal cutting tools, measuring instruments, stamping and block washers.

Clayton Mark and Company is constructing three additional buildings at its Evanston plant. The expansion will provide 36,800 square feet of manufacturing space.

Hansell-Elcock Company, 485 W. 23rd place, will construct an additional building at its plant. company manufactures gray iron castings and fabricates structural

Hearst Publishing Company, 326 W. Madison street, will substantially expand the plant of the Chicago Herald American. Lockwood Greene Engineers, Inc., engineers; Construction Company, general contractor.

Scovill Manufacturing Company, 222 W. Adams street, has begun construction of a 40,000 square foot warehouse building at 4105 W. Chicago avenue. The company manufactures brass goods.

Electro-Motive Division, General Motors Corporation, is enlarging its paint and testing shop.

Great Lakes Spring Corporation, 7035 W. 65th street will add approximately 35,000 square feet to its plant in the Clearing Industrial District. John Cromlin, architect.

Shelley Steel Corporation, 300 W. Adams street and 1379 N. North Branch, has purchased the three-story sprinklered building at 1369-75 N. Branch street. William Kaplan, real estate broker.

Omar, Inc., is building a onestory plant near Libertyville, Ill.

Ekco Products Company, 1949 N. Cicero avenue, manufacturer of baking pans and other stamped products, is expanding its plant. Friedman, Alschuler and Sincere, architects.

General Chemical Company is building some additions to its chemical unit on South Carondolet avenue.

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Aberdeen street, has purchased a one-acre site in Deerfield on which a 5,000 square foot factory will be built: The company manufactures electric testing instruments.

George J. Miller Company, a newly organized firm, has purchased a building in Skokie in which it will manufacture a line of small household items.

Warner Candy Company, 4708 N. Kedzie Avenue, will construct a factory to be located adjacent to its present plant. Tuchschmidt and Associates, architects.

Tenak Products Company, 510 Federal Street, is constructing additional floor space to its factory as 2615 N. Paulina street. Waltee Kroeber, architect; Northern Buildeers, Inc., general contractor.

Process Litho Arts, Inc., 549 St Wells street, has purchased the building at 4515 N. Kedzie avenue

Standard Stamping and Performing Company, 3129 W. 49th place has constructed an addition to its plant.

Taft-Hartley-Law That Escaped Repeal

(Continued from page 15)

munism before attaining NLRB recognition.

Although the President had declared that strikes over contract interpretations should be prevented, his bill simply stated that "public policy" opposed economic force. No means were provided, however, for enforcing the "policy." While the bill declared that strikes endangering public health and safety are also against public policy, the President was empowered only to issue a proclamation urging management and labor to maintain peaceful relations. This, plus "the inherent powers of the President," was to replace the Taft-Hartley Act's flat injunction halting "national emergency" strikes for 80 days.

Hedged On Boycotts

Some union secondary boycotts and jurisdictional strikes were declared illegal but this was hedged with complications and qualifications. The bill not only wiped out the existing closed shop ban, but also set aside all state laws restricting union security in any way. To Congressmen whose states had such laws this was adding ininsult to injury.

Though the administration bill was bad enough in the eyes of many Congressmen, ill-feeling increased on Capital Hill when the labor committees of both houses, apparently acting under stern orders, reported the measure with what many thought was unseemly haste. Hearings were held, but attempts to amend the measure were harshly cut off and the famil-

iar cries of "steamroller" rare through the cloakrooms.

Even now, many Washington observers believe the administration's revision bill would have breezed through Congress had it retained the essence of Taft-Hartley's two way restrictions. Why the administration fumbled its cards after carrying off an adroit victory in November is a political mystery that can be only partially blamed upon overconfidence.

There is, in fact, one popular but unverified, theory in Washington that Harry Truman does not want Taft-Hartley repealed — just yet. The theory is that the President wants to preserve the act as the whipping boy for still another campaign. However validate unions are already hammering for an all-out assault in 1950 and 1952 against Congressmen who woted wrong."

From one viewpoint, all but a handful of representatives - "Fair Dealers," Republicans and Dixiecrats alike - have voted wrong Vito Marcantonio has seen to that Denouncing the Truman program as a "sellout", Marcantonio tossed a bill into the hopper last Janu ary repealing the 1947 legislation and reinstating the original Wag ner Act, sans window dressing Then, in the midst of House de bate last May, he forced a teller vote on his bill. A bit sheepishly administration faithfuls trooped up the middle aisle along with Re publicans and Southerners to reg ister their vote against the pures "pro-labor" program of them all!

Some observers believe Mr. Tru

man, at heart a more conservative man than the New Dealish overones of his administration would ndicate, is not opposed to keeping ome of the Taft-Hartley weapons or dealing with labor crises that nay occur if business conditions worsen. .He has already relied upon them several times, notably against John L. Lewis, and he may still have to declare another "national emergency" if the CIO steelworkers are not satisfied with the findings of the present fact-finding board.

What really closed the books on Taft-Hartley repeal this year was the vote by which the Senate chose to retain the emergency injunction, adding to it an optional sixty-day government seizure recommended by Senator Taft. Having staked their battle on the injunction issue, almost to the exclusion of others, the unions were beaten when the Senate, as the House had done, refused to give up what Taft called the only weapon that will really stop a disastrous strike.

Defeat Obvious

President Truman, still insisting he is for his original program, has not endorsed the temporary surrender officially, but Secretary of Labor Maurice J. Tobin said in a recent interview there is "no thought" of trying to force further action this year, an obvious reflection of the President's attitude. Mr. Truman remained silent while his congressional leaders at the Capitol tried to stall the Taft-Wood drives by offering "compromises" of their own. Even the AFL and CIO let it be known that they could accept at least some of the compromises, but many loyal Democrats, at a loss over whom to follow, hewed to the no compromise line, thus helping to maintain the deadlock.

Another factor which spells disaster for any new attempt to erase Taft-Hartley is the realization that President Truman probably would veto anything but his original bill. It is considered doubtful that anything else could get past him.

Many anti-administration Congressmen now feel that the only way an improved law can be enacted is for Congress to ignore the White House and write its own. Not even Senator Taft believes the

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or your travel agent Ticket Office: 67 East Monroe St. Taft-Hartley Act should be left a is. He offered 28 amendments, in cluding a relaxation of the closes shop ban, revisions in the emer gency procedure and extension co the noncommunist affidavit to man agement.

Despite the widely-held feeling that the act should be revised, odde now are that it will remain intac until 1951, when the 82nd Com gress gets around to labor legisla There's little reason to be lieve that the present Congress will act differently next year, and labou leaders thus are setting their sight on the coming elections.

Taft's Course?

One possibility is, however, that Senator Taft, who faces a stiff re election battle next year, may re introduce his amendments in Jam uary. But Senator Taft hasn't de cided. He told this writer: "Log ically, we should press for passage of our bill in the House, but i is clear that the President would veto it. If he does, we don't gain anything. And I don't like to push on the House people a battle that won't accomplish anything."

Would there be anything to gain from making labor legislation a live issue again next year?

"There's only one advantage from the political standpoint, mak ing the President veto it," Taf declared. "That would crystallize the issue a little more, but we car make the same point now."

If the Taft Bill should somehow win the two-thirds majority of both chambers required to override the veto, the result probably would be disastrous for future plans to wipe out the Taft-Hartley Act if the amendments prove to be as fair and effective as their author claims

"I gave labor the benefit of the doubt in making my concessions on the Act", Senator Taft said.

The point GOP leaders will press is that their party tried to enact an improved labor law while the administration and labor frus trated all efforts at progress by insisting on passing their bill or none at all. As its backers con cede, the Taft-Hartley Act has its But if a majority rough spots. of the voters agree with the record of the 81st Congress to date, those probably will be ironed out ir 1951.



TRANSPORTATION and TRAFFIC

THE Interstate Commerce Commission, in its final order in x Parte No. 168 released August 1, authorized a 3.7 per cent in-rease in railroad freight rates. t is estimated that the increase vill yield the carriers \$293,000,-100 additional revenue annually. The rate boost became effective september 1 on 15 days notice. The new increase supersedes the interim increase which became efective January 11, 1947, and raises the prior rates by 10 per cent on raffic within and between Eastern and Southern territory, nine per cent within Zone 1 of Western Trunk Line territory, eight ber cent within Western territory other than Zone 1 of Western Trunk Line territory, and nine per cent on interterritorial traffic, between Eastern Southern territory. The January 11 interim increase was six per cent on traffic within and between Eastern and Southern territory, five per cent within Zone 1 of Western Trunk Line territory, four per cent within Western territory other than Zone 1 of Western Trunk line territory, and five per cent on interterritorial traffic except between Eastern and Southern territory. The carriers had requested a 13 per cent freight rate increase to compensate for increased labor and operating expenses. The increases are held to a maximum of 35 cents per net ton or 39 cents per gross ton on coal and coke, 18 cents per net ton or 20 cents per gross ton on lignite, six cents per 100 pounds on sugar, nine cents per 100 pounds on fresh fruits, vegetables and melons, and six cents per 100 pounds on lumber and articles taking lumber rates. No increases were permitted on charges for protective service or demurrage, nor on line-haul rates on iron ore to

upper lake ports for transshipment by water. Freight forwarders and water carriers were authorized by the commission to increase their rates proportionately and simultaneously with the rail rate increase. Based on the current traffic level, the commission estimates that this recent increase, with others that have been awarded since June 30, 1946, increases the nation's freight bill over \$3,000,000,000 annually and produces an over-all increase of 57 per cent in the freight rates in effect on that date.

Demurrage Rules and Charges Amendment: Several changes in railroad demurrage rules and charges were made on September 1 when the 40-hour work week became effective for non-operating railroad employes. Under the new rules Saturdays are excluded as well as Sundays and holidays in computing free time for loading and unloading cars. Only the following are considered as holidays under the amended rules: New Years Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas Day. When one of these holidays fall on a Sunday the following Monday will be considered as a holiday. On cars not subject to average agreement, the demurrage charges after the expiration of the 48-hour free time is \$3 per car per day for the first four days and \$6 per car per day for each succeeding day. Under the average agreement plan, one credit is allowed for each car released before the expiration of the first 24-hour free time. On cars held after the expiration of 48hours free time, one debit per car per day is charged for each of the first four days. When a car has accrued four debits a charge of \$6 per car per day will be made for all subsequent deten



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Forwarder - Motor Carrier Bill Opposed by C.A.C.I.: Opposition to passage of S-2113 was expressed by The Chicago Association of Commerce and Industry at a hearing before the Senate Interstate and Foreign Commerce Committee. The bill is designed to clarify the status of freight forwarders and their relationship with motor common carriers. It would define a freight forwarder as a common carrier and would permit them to enter into or operate under contracts with motor common carriers governing the utilization by the forwarder of the services and instrumentalities of the motor carriers and the compensation to be paid therefor. "Our position," the association declared, "is based upon our firm belief that it is inconsistent for the underlying carrier, who is in direct competition with the freight forwarder, to charge the forwarder lower rates than it would charge if traffic was delivered to the underlying carrier direct. Tho forwarder does not actually transport any traffic, but employs the services of existing transportation agencies. It is in direct competit tion with the underlying carries who performs the service. In our opinion, it is contrary to the Naa tional Transportation Policy to permit a forwarder as an agenta broker or consolidator to assembld a series of less-than-truckload ship ments and then obtain rates from the underlying carrier on the consolidated lot, lower than a shipper would receive if he delivered that same quantity and type of ships ment to the underlying carrier.'. Pointing out how the forwarder must limit and does limit his serve ices to the handling of the high rated traffic, leaving the lower rated traffic to the underlying care rier, the association stated, "if the freight forwarder is allowed to transport the higher rated traffic and then pay the underlying carrier less than the tariff rate under special contracts it seems quite obvious that the traffic remaining to the underlying carrier would have to be somewhat increased."

Governor Signs Illinois Overcharge-Undercharge Bill: Governor Stevenson on July 20 signed H.B. 317 which provides a two-year time limit for recovery of overcharges and undercharges on transportation within Illinois. The bill as originally drawn would only apply on motor carrier transportation; but on the recommendation of The Chicago Association of Commerce and Industry it was later amended to include all common carriers. Federal legislation establishing a two-year time limitation period for recovery of overcharges and undercharges by or against motor carriers, water carriers, and freight forwarders was signed by President Truman on June 29. This period coincides with the time limit which was already applicable for rail transporta tion under Part I of the Interstate Commerce Act.

L.C.L. Rate Increase Hearing September 21: The Interstate Commerce Commission will hold fur-

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ner hearings in Docket No. 2977, ncreased Less-Than-Carload Rates, Official Territory, September 21 in Vashington, D. C. before Examher M. J. Walsh. The proceedig was recently reopened by the commission to permit the railroads present additional evidence as vell as a modified and alternative cale of increased class rates for ess carload traffic in Official terriory. The carriers also propose an hcrease in the minimum charge nd minimum rate and the estabishment of a package minimum (See Commerce, August, .949).

Motor Carriers Adopt Rate Hike: The C.F.A. - Central Committee of Central States Motor reight Bureau has voted to petition the Interstate Commerce Comnission for authority to withdraw he increase rates under suspension n J. & S. Docket M-3045 and then bublish rates on shipments under \$,000 pounds based on the rates applicable on shipments over 5,000 bounds, plus 10 per cent, plus 20 ents per 100 pounds. The tariffs would also increase the charges for accessorial services, except the minmum charge, by 10 per cent. The ncreases under suspension in I. & 3. M-3045 ranged from one per bent where the tariff rate basis humber is 51 to 60 upwards to 10 per cent where the tariff rate basis number is 141 or over.

Express Rate Increase Hearing September 7: The Interstate Commerce Commission will hold hearing September 7 in Washington, D. C. on the Ex Parte No. 169 petition of the Railway Express Agency for a 10 per cent increase in first and second class rates. The Illinois Commerce Commission will consider the agency's request to make the same increase on Illinois intrastate traffic at a hearing to be held in Chicago on September 27. In its request for the increase in rates, the agency stated that they are faced with a \$15,-000,000 boost in wages and paycoll taxes and that the proposed ncrease would produce about \$24,-600,000 annually. Under present rates, the agency stated, it would ail by more than \$51,000,000 to neet the railroad's costs for carryng express.

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New Products

Anti-Freeze Pipe Wrap

Seasonally appropriate, the Gro-Quick Company, 340 W. Huron Street, Chicago 10, has introduced a new product reminding homeowners and businessmen that the frozen water pipe problem will soon be back. Gro-Quick's innoelectrically-heated vation is an cable and insulation unit designed to prevent freezing of underground or exposed water, gas and oil pipes. It is said to be easily installed and involves a high resistance nickel chromium wire cable that is first wrapped around a pipe and then covered by rolls of plastic insulation and an outer waterproof wrapping. The unit is thermostatically operated to prevent electricity waste.

Asphalt Shingle Paint

The Dewatex Manufacturing Corporation, New York 18, N. Y., has introduced a new paint for asphalt shingles called "Asphalt-Seal," which, according to the company, provides a waterproof finish and also stops, bleeding and crumbling in asphalt shingles, as well as insulated brick siding. The paint comes ready mixed for immediate application in three light and four dark colors.

"Magnetic" Cement

A synthetic rubber cement that can be applied to a variety of materials including fabric, leather, glass, paper, wood and steel in advance of actual assembly has been developed by the Union Bay State Chemical Company, 50 Harvard Street, Cambridge, Mass. Precemented surfaces can move on along an assembly line or even be shipped to the point of use before being joined together, because the adhesive can be reactivated by heating under infra-red, steam or dry heat or by the application of a solvent.

Stimulated "Neon"

Rather simple in principle, yet said to be a highly effective point-of-sale advertising medium, is the new "Litewriter Sign," distributed by the Maxilume Company, 125 W. Hubbard Street, Chicago 10.

The "Litewriter" consists of chrome frame containing an 18x1 inch glass panel illuminated by built-in fluorescent lamp. Advertising messages sketched on the panel with any of a variety of special colored crayons are said to show up with unusual brilliand under the fluorescent light.

Robot File

"The "Robot-Kardex," introduced by Remington Rand, Inc., New York 10, N. Y., is a combination desk and file cabinet that hold some 4,000 complete sets of 8x records in slightly over 13 squared feet of floor space. The record are housed in a series of sliding shelves, any one of which brought to desk-high level automatically by pressing an index key. An operator thus sits still an allows desired records to spring into place immediately.

Illuminated Switch

Finding the light switch at night should be easier with a new transparent lucite switch introduced be Sears, Roebuck and Company, Che cago 7. The switch is illuminated by a tiny neon lamp which glow only while the switch is in an "off position. The switch is said to us less than 10 cents worth of electric current a year.

Small Parts Cleaner

The smallest parts made by in dustry are said to be cleaned quickly and automatically by a new cleaning machine introduced by the L and R Manufacturing Com pany, Arlington, N. J. The uni includes a variety of baskets, di viders and basket insets into which small parts can be placed. The holder is then snapped on the motor shaft, and the parts are cleaned, rinsed in second and third containers, and finally dried in the drying chamber. A complete cleaning cycle requires about 19 minutes.

Piano Converter

A new electronic device, called the "Organo," manufactured by the Lowrey Organ Division o Central Commercial Company

hicago, can be attached to a andard piano to provide organ nusic in complete chord structures r a combination of organ and iano music. The "Organo" offers 60-note range of tonalities hrough a tone cabinet housing he electronic tone generators and peaker. It uses standard radio ubes and operates on 110-125 olts a.c.

Tapper Tracer

Worried about a tapped telehone? Teletap Corporation, 460 V. Thirty-fourth Street, N. Y., has ome up with a device that signals when someone is listening in on wire-tapping device or on another extension. The electronic unit distinguishes between voltages generated by a normal voice on phone circuit and abnormal volages caused by snoopers, then tarts a warning light when disurbances are present. The light an be extinguished by a reset button.

Speedy Oil-Drainer

The motorist in a hurry who lislikes to wait for a slow oil-drain ob should look for a station featuring Jiffy Oil Drainer Company's new pressure drainer which drains he crankcase in two minutes. The drainer is equipped with a coupling that attaches to any service station air hose; it holds eight quarts of oil and has over six feet of oil-resistant hose. It is distributed by Allen-Sims Company, 1415 N. E. Second Avenue, Miami.

Coupling Protector

The Morse Chain Company, a division of Borg-Warner Corporation, 310 S. Michigan Avenue, Chicago 4, has introduced a line of plastic covers for chain couplings. They are molded of rag-filled phenolic plastic to provide maximum strength, minimum weight and sealed-in lubrication for couplings.

Fisherman's Helper

Fishermen have been digging earthworms for, lo, these many vears by a highly unscientific method, according to the No-Wilt Plant Products Company, North Olmsted, Ohio. The modern method is to use the company's new powder, called "Early Bird," which when dusted lightly over the ground and then soaked down,



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End of An Era

(Continued from page 19)

his commencement address last June, went so far as to warn alumni that they cannot take it for granted that there will always be a Loyola. There are strong groups, he said, that feel that education will fail unless the state takes over.

Northwestern's Franklyn Snyder, voicing the same fear of possible government domination, has declared that already some universities have become "lopsided" from accepting too much government research work. "A privately-controlled university like Northwestern," he added, "can make a larger contribution to the welfare of society if it is entirely free to choose its own ways of making that contribution. It is conceivable, of course, that education in most of its branches will be a pensioner at Washington. Should that situation develop, private institutions will probably be forced to join the bread line."

Another urgent problem of higher education, many university officials believe, is the job of holding to traditional goals. Although educators express those goals in vary-

ing terms, most agree that their real aim is to develop individuals capable of independent thinking with an understanding and appreciation of the world about them and with a capacity for contributing toward community improvement and the preservation of freedom. The point is, of course, that while educational institutions deprovide professional training, this kind of training is not their fundamental responsibility.

Basic Goals

Probably the most articulate advocate of this thesis is Robert M. Hutchins, chancellor of the University of Chicago, who told his liberal arts freshmen last September, "You will never get a cent more because you have studied here than if you had never studied at all!"

The heart of education, Hutchins went on to say, is independent thought "Liberal education is education appropriate to man, designed to free man from the mammal within. It is an education that hopes to free each generation from the shock of the unexpected and the fear of the unknown by dealing



ith permanent, not shifting, contions; that is the power of viewg many things at once, as one hole, of fitting new things as they cur into that whole, and referring them to their place in a universal stem."

These seemingly intangible goals a liberal arts education have een set forth by the University of hicago in these words: "The purose of general, liberal education not a job, but any job; not a rofession, but any profession; not station in life, but any station life."

Dr. Snyder believes that one of lucation's most difficult tasks is maintain a fair balance between he humanities and social sciences in the one hand, and the laboratory sciences on the other. "The logue of science, pure or applied, as never been as great as it is toay; its immediate contribution to tuman welfare never more apparant," he has said. "But in the long lun, the humanities and social sciences will offer at least as much to be bewildered mankind."

Cardinal Samuel Stritch, chanellor of DePaul University, thinkig along the same line, has reeatedly emphasized the role of ducation in providing leaders. "We vant to preserve the right values n society," the Cardinal has said. We want to preserve freedom. The doctrinaire is about. It is not nerely the Communist. The Comnunist has many companions in he spreading of these new docrines. For just as vicious as the Communist is the man who would ry to reconstruct on a social welare program without delving down nto the things there and rehabiliating the man himself."

Need Social Study

The viewpoint is by no means confined to educators whose chief nterest lies with the liberal arts. Dr. Henry T. Heald, president of the Illinois Institute of Technology and an official of the Engineers Council for Professional Development, has declared that engineering graduates must have a sound background in social and humanistic studies as well as an understanding of scientific principles. He notes that some engineering schools already require more English and

literature studies than do many liberal arts schools.

It is significant of the thinking of educators that two of them, Dr. Hutchins and Dr. Snyder, have decried the decline in individual selfreliance and the growing search for security. Speaking before June graduates this year, Dr. Snyder said, I hope that 50 years from now freedom will still exist in this land of ours. I hope we shall not have been enslaved by either an allpowerful federal government in Washington, or by debt, much of it incurred in the name of a vague concept called 'security' which will inevitably crush all initiative."

Security Mania

A year ago Dr. Hutchins declared that one of the "most distressing features of this depressing epoch in history is the universal demand for security, the universal sense that we have lost all control over events, the universal willingness to leave decisions to others, which we see in its most acute form in those countries which have allowed themselves to be taken over by dictatorships of one kind or another."

Chicago's educational institutions, meanwhile, have not been concerned exclusively with the training of youth. Late afternoon and evening classes at universities as well as at some smaller schools have enabled thousands of adults to obtain the advantages of higher education. Speaking of the importance of a dult education, Chancellor Hutchins recently said,

"The educational curriculum is upsidedown. The understanding of history, literature and moral and political philosophy, for example, can come only with maturity. They may be studied at any age, but they cannot be understood until the student has had some experience in life. To study such subjects in school and college and not to study them again is in effect never to study them."

While educators concern themselves, understandably, with the cultural aspects of education, the hard fact remains that man must work for a living, and he needs the services of professional men and artisans. Thus the teaching of professions and trades cannot be neglected. Chicago's preeminence as a



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liberal education center has been matched by its facilities for professional training in business and in manual skills. Night schools flourish in the city and with them a host of correspondence schools offering vocational training. The current business easing-off will doubtless have a stimulating effect on night and trade school attendance next Fall, with many parttime scholars preparing for new jobs or better equipping themselves to hold present ones.

A disturbing development in the night school field is reported by one observer who sees a threat in the increasing unionization of industry. In the past the ambitious young mechanic knew he had a chance to rise in his company and that night school would help him climb. Unionization has created a stratification, this educator contends, and now many a smart shop man aspires to union leadership rather than to the president's desk.

While most educators see 1949-50 as a year of returning normalcy,

a serious depression could, how ever, upset their expectations. Th G.I. student is disappearing, bu there are some who predict that business conditions worsen ther will be a new back-to-school rusi of veterans taking advantage o subsistence payments. Millions ar still eligible for educational bene fits and they have until July, 1951 to join the government's big pay roll. The mathematics of the situa tion are simple: many veteran could ill afford to pass up subsis tence if a severe recession devel oped. Even now, veterans are crowding vocational schools in area where business has turned sharply

As for the possible effect on the colleges now working out from under the G.I. load, there is significance in the fact that G.I. Joe i getting older; it is now four year since the war ended. The older he becomes, the less inclined is the average person to launch a college career. G.I. Joe is no exception.

Productivity On the Upgrade

(Continued from page 14)

A the company put in a different system of melding and mechanized the operations in February, 1947, while in the other plant no mechanical changes were instituted. Under the impetus of layoffs and reductions in the work week, the pounds of good castings turned out per man hour in foundry A rose to 34 as of June.

In still another foundry of the same company, this one unmechanized and turning out heavy castings productivity slipped from 102 pounds an hour in 1941 to 70 in 1948, and fell another pound by June, 1949. While productivity was on the skids, wages went from 92 cents an hour in 1941 to \$1.57 as of June.

Mechanization does not seem to be the key to what happened because in a fourth foundry of the company, this one completely mechanized, productivity slipped from 91 pounds in 1941 to 69 as of June, while wages went from 89 cents an hour to \$1.72 in June. This foundry produces medium weight castings.

These examples point up a fact that has grayed many a business head, namely, that the rise ir wages has far outstripped productivity performance. Until 1930 productivity in American industry increased at a greater rate than did wages. Since then the trend has been reversed.

The National Industrial Conference Board surveyed the situation this year and came up with this conclusion: Although there are "some segments of manufacturing in which productivity has advanced considerably since 1946, for all manufacturing combined, the impact of the postwar surge in hourly wage rates or unit labor cost has not been offset or even significantly retarded by gains in output per manhour."

The board found that in the closing months of 1948 unit labor costs for all manufacturing were about 100 per cent higher than in 1939.

Many employers are taking heart from the fact that wages are leveling off while productivity is now tending upward. This is substantiated by numerous surveys of business by the government and private research organizations. In er cent surveys between 30 to 50 er cent of businesses sampled reorted that productivity has im-

roved in the past year.

Reasons for these gains — according to those queried—more efficient tachines and production techiques; supervisors and employes tore experienced, better trained; improved employe relations; inallation of bonus or incentives and greater application of workers their jobs.

The construction industry has, or example, experienced a renarkable improvement in produc-

vity since last year.

One of the largest builders of esidential projects in the Chiago area says there is "just no omparison between productivity f building trades workers last year nd this — it is so improved." Why? The builder's answer is a reer labor market. Last year, he points out, a contractor did not are fire a bricklayer or carpenter because he couldn't be replaced; his year, with few exceptions, hese men can be replaced.

Building Speed-Up

On one housing project, which has been over a year in work, the nen were laying 450 bricks a day on brick veneer houses going up ast June. This June the rate was up to 650 bricks a day. In all building trades, quality as well as quantity of work is better.

Gains in productivity are to be ound in other business too. One nanufacturer of conveying equipment reports that in the first six nonths of 1948 average productivity was 56.6 pounds per man hour of direct labor. At mid-1949 the average was 62.7 pounds an hour. This company attributes the improvement to installation of new nachinery and to improvement in worker effort, following both layoffs and reductions in the work week.

Some of the credit also went to the company's wage incentive plan. There is evidence that a good incentive plan can boost productivity on an average of 20 to 25 per cent, according to George Fry and Associates, management engineers. In some cases, installation of an incentive program produces startling results of 90 per cent improvement in productivity.

Many companies discount the

human element in productivity gains. A leading manufacturer of electrical and electronic equipment, for example, says the company's unit output per man hour is continuously rising but it is due to use of more efficient equipment and tools rather than to greater employe efficiency. Changes in product design also affect the plant's output per man hours.

In still other companies it is neither machines nor workers that tip the balance in favor of increased productivity. In one company, a large wood products manufacturer, poor organization and inadequate key management personnel made it easy for production crews to slow down on the job.

A management engineering firm was called in. Jobs at every level were defined and organized in proper relation to one another.

Personnel was shifted and new men brought in. An operating management committee was established which facilitated planning and coordination of all operating departments. The result was that the higher caliber of management and supervisors changed the atti-

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tude of production men from on of indifference to a sincere intered in doing their jobs well. Within a few weeks productivity per man hour had risen 20 per cent.

A concise summary of the majd elements affecting productivity set forth in a new book "Control ling Factors in Economic Develop ment" by Harold G. Moulton president of Brookings Institution Wrote Mr. Moulton:

"It is true that output may be increased by more efficient per formance on the part of workers but the factors of primary importance have been the provision of more abundant and efficient tools and improvement in industrial or ganization and management."

The Brookings president est mates that a "universal increase of 20 per cent in output through better labor performance would mean close to \$40,000,000,000 worth of additional national in

come.

Output Figures

According to the Bureau of Labor Statistics, output per man hour rose at the average rate of 3 per cent a year from 1909-1939 doubling in a period of a little over 20 years. Overall figures are not available for the period since then, but BLS estimates man how output rose 2 per cent in 1940 over the 1947 level.

Sumner H. Slichter, Harvard University economist, has predicted that productive efficiency may rise 3 per cent this year. Underlining the importance of productivity in the national economy Mr. Slichte said recently:

"Regardless of the trend of taxe or prices, the standard of living will rise provided output per man hour increases and reasonably ful employment is maintained."

The 20th Century Fund also harecently underscored the necessity for further strides in productivity Said the Fund:

"The whole secret of our constant advance is our ability to in crease our output per man how of work. We have stepped this up from an average of 27 cent worth of goods and services turned out in an hour's work in 1850 to \$1.15 in 1940 and to an expected \$1.61 in 1960." (Figure based on buying power of the dollar in 1947.)

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The senior girl sniffed disdainfully as the pink-cheeked freshman boy cut in. "Just why did you have to cut in when I was dancing?" she asked.

"Sorry," the freshman said, hanging his head in humility, "I'm working my way through college and your partner was waving a \$5 bill at me."

Walking along a street in the local county seat, a man was attracted by frightened screams from a house. He ran in to investigate and found a frantic mother whose small boy had swallowed a quarter. Seizing the child by the heels, he held him up, gave him a few shakes, and the coin dropped to the floor. The grateful

mother was lost in admiration.

"You certainly knew how to get it out of him," she said. "Are you a doctor?"

"No, madam, I'm from the Internal Revenue Bureau."

The guy decided to reform. The first week he cut out smoking. The second week he cut out drinking. The third week he cut out women. The fourth week he cut out paper dolls.

The director was in the front office to complain about Miss Wonderleigh, the

veteran actress of the studio.
"I am afraid," said he, "that Wonderleigh has reached the end of the trail. She learned the art of pantomime for the silent films; she mastered talk for the talkies, but now she faces an impossible task!"
"An impossible task, eh?" the producer

rejoined.
"Yes," explained the director, "she can't blush for the color cameras!'

Two modern youngsters were discussing

the subject of piggy banks.
"I think it's childish to save money that way," little Mary opined.
"I do, too," Annie replied. "And I believe also that it is.

believe also that it encourages children to become misers."

"And that's not the worst of it," Mary exclaimed. "It turns parents into bank robbers.

The courtroom was crowded as the judge finished his lecture to the defendant

"That's fine, judge," the husband said as his face lit up with a big smile. "I'll try to slip her a couple of bucks now and then, myself."

First Gal: "My husband is one in a hundred."

Second Gal: "How do you keep him from finding out?"

"He said that you were a sculptor," the witness testified, "but that you should wash more often.'

The attorney scowled. "Give me his exact words."

"Well," answered the witness hesitatingly, "he said that you were a dirty chiseler."

Proud parent on meeting the new first grade teacher: "I am very happy to know you, Miss Smith. I am the father of the twins you are going to have next Sep-

Concerned about her husband in th Navy, a young wife sent a note to he pastor. It reached him as he ascended the pulpit. It read, "John Anderson having gone to sea, his wife desires the prayer of the congregation for his safety." Look ing over it hastily, the minister reach aloud, "John Anderson having gone to see his wife, desires the prayers of the congregation for his safety."

"We were happy for more than a year, said the husband to the judge, "and the

the baby came."

"Boy or girl?" inquired the judge.

"Girl," replied the husband. "Beautifu and blonde . . . and she moved in nex

"Hey," cried Satan to a new arrival you act as if you owned the place."
"I do," came the answer, "my wife gave it to me before I came."

For the first time, the new sensation of the business world was being interviewed

the business world was being interviewed by the press.

"Mr. Warren," one reporter remarked "you are truly a self-made man. You have educated yourself while you fought your way up to success. Tell me, how did you manage to get in all that read ing during those busy year?"

"It was quite simple," Mr. Warren modestly explained. "I kept a good book open on my desk, and read it during those periods when someone said to me over the telephone, "Just a moment please." please."

A farmer's barn burned down and the agent for the insurance company, explaining the policy that covered the structure told him that his firm would build another barn of similar size instead of paying the claim in cash. The farmer was furious. "If that's the way your company does business," he exploded, "You can just cancel the insurance on my wife!"

